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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 7, No. 1, Fall 1999

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Epidemiology

Hepatitis C initiatives

Hepatitis C is a viral infection of the liver that is typically chronic and can cause serious medical problems in some people. These medical problems can include cirrhosis, liver cancer and death. It is estimated by the Centers for Disease Control and Prevention (CDC) that 1.8% of the general population is infected with hepatitis C (translating to about 110,000 people in Massachusetts), and the majority of these individuals have not yet been diagnosed. Over the last year, a wide range of projects and activities have been initiated by the Division of Epidemiology and Immunization that focus on hepatitis C detection, education and prevention.

A statewide advisory committee has been organized to help the Department of Public Health (DPH) in the development of programs to address hepatitis C and educational efforts. This committee consists of clinicians, public health staff, service providers, legislators and HCV-infected consumers.

In order to determine how best to meet existing need for provider education, focus groups with primary care physicians were held in early 1999. The results indicate that many physicians had not received adequate information regarding hepatitis C and that education was needed.

With respect to provider education, an educational conference on hepatitis C was held in June 1999, specifically for primary care providers, and materials have been developed. Among the materials that will be sent to medical providers is an audiotape that was developed by staff at DPH and the Tufts University Medical School. The audiotape consists of interviews with experts in the field on how to manage and educate patients with hepatitis C infection. The audiotape will be mailed in late 1999, along with a diagnostic algorithm pocket guide and relevant educational materials. These materials should assist primary care providers in providing care to their patients with hepatitis C.

Patients and communities must also be targeted with educational efforts in order to bring those who should be screened for hepatitis C to testing and identify available options for those who are infected. DPH has developed a patient awareness poster to encourage people who may be at risk for hepatitis C infection to speak to a health care provider about being tested. Additionally, the DPH fact sheet on HCV has been revised and will be available shortly.

Currently, there are not sufficient data available for Massachusetts on the impact of hepatitis C. This information is critical for public health planning, and consequently, the surveillance system for hepatitis C is being revised. The revised system will allow for a clearer sense of who is infected with hepatitis C, what disease burden can be expected in the future, and, importantly, what areas and populations need to be targeted for hepatitis C prevention. This revised surveillance system will be constructed as a two-tiered effort: passive and enhanced-passive. The passive system will be in the form of laboratory reporting from the labs that perform HCV testing. These reports will continue to go to the local boards of health and DPH. The enhanced-passive component will target specialists who are likely to be treating HCV-infected patients (e.g., gastroenterologists) for increased reporting and ongoing communication. Both of these elements will be conducted in conjunction with continued investigations by local boards of health. The investigation process will be supported by new guidelines created for boards of health (distributed in the Division of Epidemiology and Immunization's upcoming *Guide to Surveillance and Reporting*) that will provide clearer instructions on how to investigate hepatitis C cases effectively. ♠

Reportable disease guide

The Division of Epidemiology and Immunization is placing increased emphasis on surveillance and reporting of communicable diseases and providing resources to local health departments for their disease reporting responsibilities. This emphasis is based, in part, on initiatives from CDC and subsequent funding to improve reporting of communicable diseases. The success of the Massachusetts *Foodborne Illness Investigation and Control Reference Manual* has stimulated the development of another educational/training manual for local health departments, namely the *Guide to Surveillance and Reporting*.

This comprehensive manual will offer guidance on surveillance for the communicable diseases reportable to the Division of Epidemiology and Immunization. The manual will contain information on: each reportable disease and its epidemiology, reporting criteria, state laboratory testing services, routine case investigation and controlling further spread. A copy of each of the case report forms will also be included.

Through regional meetings that were held in 1999, input on the content and layout of the manual was received from 85 local health departments. The consensus from the meetings was that the manual will be a very useful tool. The anticipated date of completion is late spring/early summer 2000. Information on completion and distribution of the manual will be announced in future issues of this newsletter. ♠

Shigellosis outbreak in Hampden county

Since the end of May 1999, a large number of shigellosis cases has been reported from the Hampden County area, representing a community-wide outbreak. It appears that this outbreak is being maintained through person-to-person spread. Shigella is very contagious, and it requires only 10-100 bacteria to make someone ill. To prevent shigellosis in schools and daycares this fall, we are offering the following recommendations:

To Medical Care Providers:

- Aggressively diagnose and treat any patient with diarrhea. Keep shigella high in your differential diagnosis.
- Test for antimicrobial susceptibility, because resistance to antimicrobial agents by shigella is common.
- Promptly report each case of shigella infection to the local health department (Regulation 105 CMR 300).
- Query every case for foodhandling status. Confirmed patients who are foodhandlers should be promptly reported to the local health department for implementation of appropriate exclusion and clearance criteria.

To Local Boards of Health:

- Exclude confirmed cases who are foodhandlers until cleared with two negative stools (Regulation 105 CMR 300, outbreak circumstance).
- Recommend that cases in daycare/school be excluded and cleared with two negative stools.
- Conduct surveillance at affected daycare/school for symptomatic attendees or staff. Symptomatic attendees should be excluded and cleared with two negative stools; foodhandling staff **must be** excluded and cleared with two negative stools.
- Exclude symptomatic contacts who are foodhandlers until cleared with two negative stools; recommend that symptomatic contacts (who are non-foodhandlers) who attend

daycare/school be excluded and cleared with two negative stools.

- Educate daycares, schools and parents in your town about the importance of adhering to strict handwashing policies.
- Visit schools to ensure that bathrooms are in good working order and that adequate soap and water are available. Post educational messages at these sites.
- Continue with control, prevention and educational efforts into the school year to contain the outbreak.♠

Immunization

New recommendations for polio immunization

The global polio eradication initiative continues to progress rapidly and the likelihood of poliovirus importation into the United States (US) has been greatly reduced. Since 1997, the sequential polio schedule has been well accepted by providers and parents and no declines in childhood vaccination coverage have been observed. Based on these data and the wish to eliminate the risk for vaccine associated paralytic polio (VAPP), in June 1999, the Advisory Committee on Immunization Practices (ACIP) issued new recommendations for routine polio immunization: **as of January 1, 2000, an all IPV schedule should be implemented in the US**. The routine vaccination schedule for IPV is a total of four doses at ages 2 months, 4 months, 6-18 months and 4-6 years.

Although oral polio vaccine (OPV) is currently being used for the second two doses of the IPV/OPV sequential schedule, as of January 1, 2000, the use of OPV in *any* situation will only be acceptable in the following three circumstances: 1) mass vaccination campaigns to control outbreaks of paralytic polio; 2) unvaccinated children who will be travelling in less than four weeks to areas where polio is still endemic; 3) children of parents who do not accept the recommended number of vaccine injections. These children may receive OPV only for the third or fourth dose or both; in this situation, it is recommended that health care providers administer OPV *only after* discussing the risk for VAPP with parents or caregivers.

The Massachusetts Immunization Program (MIP) urges all providers to begin implementing the new all IPV schedule by depleting their OPV stock and converting all their polio vaccine stock to IPV. As of December 1, 1999, the MIP will only distribute IPV except under special request. Please call the MIP with any questions at (617) 983-6800.♠

Influenza pandemic planning

An influenza pandemic occurs when a novel and highly contagious strain of the influenza virus emerges, affecting populations around the world. It has been more than 30 years since the last pandemic and many experts consider another pandemic to be inevitable. In this century, the most severe pandemic occurred in 1918-1919, when at least 20 million people died worldwide. Less severe pandemics occurred in 1957 and 1968.

In 1997, 18 people in Hong Kong were infected with an avian influenza virus (H5N1), resulting in six deaths. In April 1999, there were two confirmed human cases caused by another avian influenza virus (H9N2). Neither virus resulted in sustained person-to-person transmission. However, when avian and human strains of influenza virus circulate in the community at the same time, there is the potential for exchange of genetic material between strains and the emergence of a new strain with increased pathogenicity and enhanced person-to-person spread.

In Massachusetts alone, the Department of Public Health estimates that the next pandemic could result in up to 2.2 million cases of influenza, 1 million outpatient visits, 18,000 hospitalizations and 6,000 deaths over the course of several months. During a pandemic, vaccines, antiviral medications and antibiotics to treat secondary infections likely will be in short supply; health care and public safety workers will be at increased risk for exposure and illness; and existing medical facilities may be quickly overwhelmed.

Pandemic planning at the local level should include forging better communication among public health agencies, the medical community and the emergency response sector. This partnership is necessary to develop contingency plans for the provision of adequate medical care and maintenance of essential community services during a pandemic or other major health crisis. Plans must be developed for local storage, security and administration of large amounts of vaccine, should a vaccine become available. We must also increase the emphasis now on influenza vaccination of all high-risk groups, such as those over 65, long-term care residents, people with chronic medical problems, etc., to provide a more solid infrastructure for vaccination during a pandemic. Finally, in order to reduce deaths caused by secondary bacterial pneumonia, we must improve coverage with pneumococcal vaccine during this pre-pandemic period.

For more information or to borrow a copy of the Centers for Disease Control video, *Preparing for the Next Influenza Pandemic,* contact Donna Lazorik, RN or Immunization Program staff at (617) 983-6800.♠

Vaccine Storage Temperatures

Colder is not better in the case of refrigerated vaccines. The proper storage range for *refrigerated* vaccines is 35°F to 46°F (2°C to 8°C). If the temperature in your refrigerator reaches 32°F (0°C) or colder the vaccines (except MMR and pneumococcal vaccines) are damaged and should **not** be used.

In contrast, *freezer* temperatures for oral polio vaccine (OPV) and varicella vaccines are never too cold. Varicella vaccine must be stored at –15°C (+5°F) or colder, and OPV must be kept at a freezing temperature. If the temperature in your refrigerator or freezer has been out of range, or if you have questions about vaccine storage, please contact the Vaccine Management Unit at (617) 983-6828.

STD

Chlamydia testing expands

Chlamydia trachomatis is the most frequently reported bacterial sexually transmitted disease (STD) in the US and Massachusetts. It is estimated that there are three million cases each year in the US, with 8,363 cases reported in Massachusetts in 1998. If left untreated, a chlamydia infection can lead to chronic abdominal pain (pelvic inflammatory disease, or "PID") and may lead to complete infertility. In addition, this inflammatory disease can elevate a person's risk for contracting HIV 3-5 fold.

Chlamydia is most frequently reported among teens and young adults. As such, prevention and control programs need to be focused on ways to reach young people. One of the most important is among incarcerated populations. Inmates are at high risk of having been exposed to sexually transmitted infections. They are more likely to be from poor communities. The majority of incarcerations are connected with either substance use (including alcohol) or substance distribution. Most inmates are returned to the community within a fairly short period of time, where their risk of infection is again elevated. Indeed, chlamydia infection rates as high as 19% among incarcerated teen-aged females have been reported. Because of this, chlamydia screening has been piloted among incarcerated populations.

The first pilot by the Division of STD Prevention was to initiate voluntary screening among women at the Hampden County House of Correction in Ludlow. Since beginning this project in February of 1999, 165 women have been tested with four (2.4%) found to be infected. In April 1999, voluntary screening of men began in the same jail. Thus far, 1,061 men have been tested with 64 (6.0%) positive. All but two of these cases were asymptomatic. This screening is ongoing.

Our next attempt was to offer a one-time, voluntary, screening program in Berkshire County House of Correction in Pittsfield. Of 250 inmates, 135 agreed to be screened. Seven men (5.1%) were infected, with none having symptoms that would have suggested they were infected.

The Division's most recent effort to expand screening was at two lock-up facilities for girls run by the Department of Youth Services (DYS) in Boston and Waltham. Since April, 111 girls have been tested and 20 (18%) were positive. We also collaborated with the

Suffolk County Jail on Nashua Street in Boston to initiate screening of the women. Since May 1999, 263 women have been tested and 10 (3.8%) were positive.

For anyone who tested positive, the Division of STD Prevention offered notification services for partners. It is not enough simply to screen those who are incarcerated. It is important to reach their partners in the community, since they may also be infected, and offer risk-reduction education as well as testing and treatment resources.

The Division of STD Prevention has applied for two grants that would provide the resources to expand this screening to more jails and DYS facilities. These would also allow us to more accurately measure the impact of screening in jails, coupled with partner services in the neighborhoods, on the prevalence of chlamydia infection in the community at-large. ♠

Disease intervention specialists

The prevention and control of sexually transmitted diseases (STDs) is complex and important work. Situated in the Division of STD Prevention are Disease Intervention Specialists (DIS). These are public health professionals intensively trained to be combined health educators/counselors/case investigators. They work with individuals, communities, medical providers, laboratories to prevent STDs. Their work involves providing information to communities on STDs, providing treatment referrals, investigating priority cases of STDs and notifying partners of infected persons.

The DIS can be contacted at the Division of STD Prevention at (617) 983-6940. DIS take calls from the general public, people infected with STDs and medical providers. They provide general STD information, support for those who are infected or at-risk of infection and answer questions about STD transmission.

Under reporting regulations, the department receives STD test results from laboratories, clinics, hospitals and medical providers. These results are assessed to determine if a person is still infectious or requires treatment. If either of these criteria is met, the DIS will follow-up with them to discuss treatment options, provide counseling and information about the infection, and discuss the prevention of transmission to others. This work is done in partnership with the medical provider who is treating the infected person.

In some cases, it becomes necessary for a DIS to visit a patient in order to provide information about their infection and how to manage it, as well as to counsel on disclosing their infection to their sexual partner(s). It is important to note that in all of the work that they do, the DIS maintain strict confidentiality.

One of the critical aspects of DIS work is to assist patients in identifying any sexual partners that may also be infected. This provides a mechanism to have other at-risk persons screened and referred into treatment, if necessary. Often, the patients will manage this disclosure on their own, but sometimes individuals request the assistance of a DIS. In these situations the DIS can provide the patient with counseling on ways to discuss these issues with their partner(s) and to make sure that the patient is properly informed so they accurately describe the situation to their partner(s). At other times, a person may decide that they are not able to explain their infection to a partner and give permission for a DIS to contact and inform the partner. All of the DIS partner notification services are optional and are only conducted at the request of the patient. This, along with the range of other services that DIS provide, allows for concrete responses to address the prevention of further disease progression and transmission of STDs. ♠

TB

Changes in skin test antigen

After more than a century of use, the tuberculin skin test remains a source of clinical problems. In January of this year, the Division of Tuberculosis Prevention and Control issued a memo to health care providers stating that the brand of tuberculin skin testing antigen supplied to public health agencies was changed from Tubersol™ (Connaught, Swiftwater, PA) to Aplisol™ (Parke-Davis, Morris Plains, NJ). Years earlier, the Division made a decision to purchase the Connaught material exclusively because of numerous published reports of false positive reactions with the Parke-Davis product. Other state and local health departments made the same decision. However, over the ensuing years, the price of Tubersol™ soared at the same time that its usage increased due to the 1985-1992 TB resurgence. Consequently, Tubersol™ consumed a large portion of the Division's drug budget.

Recently, the Centers for Disease Control and Prevention (CDC) published several reports directly comparing a new batch of Tubersol™ with Aplisol™ and PPD-S, an international standard. The first published study (Clin Infect Dis 1997; 25:661-3) compared the response in 49 patients with recent active tuberculosis and found no statistically significant difference in size of the induration. In a more recent study, CDC compared all three antigens in 1596 persons believed to be at low-risk for tuberculosis (JAMA 1999; 281:169-171). Their findings suggested that Aplisol™ produced slightly larger reactions than Tubersol™, but that this did not significantly change skin test interpretation. The article concluded: "the choice of product used for skin testing has little effect on test performance." Based on these data and a one-time, extremely favorable purchasing opportunity, the Division made the decision to switch to Aplisol™ and secured a large supply of antigen for distribution.

As agencies and institutions used up their supply of Tubersol™ and began switching to Aplisol™, the Division received numerous complaints of large erythematous reactions causing concern among patients and providers. These red reactions are usually not associated with significant induration, and most have proven negative upon retesting with Tubersol™. The Division is actively collecting and investigating these complaints, and has been in touch with CDC. The problem may be differences in manufacturer lots that CDC study did not detect, or as suggested by Sbarbaro and Iseman (Clin Infect Dis 1997; 25:664-5), Aplisol™ may share more antigens with environmental mycobacteria, resulting in more erythema, if not induration. If true, this will require readers to assiduously avoid misinterpreting erythema as induration. When in doubt, the test should be repeated with Tubersol™. The Division can supply providers with small amounts of Tubersol™ for repeat testing, as long as our supplies last. If good data are published that suggest important differences in these products, the Division will reconsider its current policy. ♠

Civil surgeon training

In October 1998, the Massachusetts Medical Society (MMS) hosted a training program for Civil Surgeons. Entitled "Clinical Update for Civil Surgeons," the training was a collaborative effort between Immigration and Naturalization Service (INS), Massachusetts Department of Public Health, Centers for Disease Control and Prevention (CDC) and MMS.

As part of the process of obtaining permanent residency in the United States, the INS requires applicants to have a medical screening to include TB, syphilis and HIV testing, as well as a physical and mental health evaluation. Civil surgeons are physicians designated by the INS to complete the screening process.

According to the INS, 12,000 - 15,000 Massachusetts residents submit applications for adjustment of status annually. Medical screening is one means of evaluating the health of aliens who apply for admission or adjustment of status. Civil surgeons, following procedures prescribed by CDC, can diagnose, refer and treat disorders that could otherwise result in exclusion from the US. The purpose of the October training was to expand knowledge and skills in the areas of TB, STD, and vaccine preventable diseases as they relate to the INS medical examination.

Feedback from the training was positive, however, comments highlighted the difficulties encountered by civil surgeons in making referrals to local health departments and state TB clinics. Confusion regarding referral guidelines has prevented applicants with positive TB skin tests from being evaluated. As a result, the TB Division and the Refugee and Immigrant Health Program are piloting a referral system between selected civil surgeon sites and state TB clinics, and will gauge its effectiveness upon evaluation rates and initiation of preventive therapy. ♠

TB Annual Report:
Copies of the TB Prevention and Control Annual Report may be obtained by calling (617) 983-6970.

Metro west regional TB update

Tuberculosis Surveillance Area (TSA) 2
TSA Nurse: Jo-Ann Keegan, RN, MSN

Clinical Services. The TB Division funds 26 TB clinics throughout the state. The Lahey Clinic in Burlington is one of three TB clinics located in TSA 2, and the newest in the state. The clinic is open on Wednesday afternoons for first-time patients and will accommodate returning patients at other times if necessary. Dr. John Beamis, along with Dr. Anthony Campagna of Waltham Deaconess Hospital, head a team of pulmonary specialists who see clinic patients. Deb McManus, the Lahey Clinic Nurse Manager, coordinates outpatient services with area board of health nurses, who also assist with follow-up outside the clinic. Appointments can be made through the Lahey appointment coordinator at (800) 962-1700 or (781) 744-8899.

Epidemiology. In 1998 there were 15 cases of active TB in the greater Burlington area, the catchment area Lahey Clinic serves. This compares with 12 cases in 1997. TSA 2, as a whole, had an increase in cases from 49 in 1997 to 60 in 1998.♠

You be the epi

You are a local public health nurse and receive a report of a case of hepatitis A virus (HAV) infection in a 32-year-old man who lives with his wife and one-year-old twins in your town. He is a self-employed contractor, his wife works part-time at a bookstore and his children attend daycare. He has no history of travel, eating raw shellfish or known contact with other cases of HAV infection.

1. First, confirm the diagnosis! The IgM anti-HAV antibody **must be positive.** A total anti-HAV positive result does not confirm an active case of HAV infection.
2. Complete a Viral Hepatitis Case Report Form by interviewing the patient and/or medical provider. Pay particular attention to the sections labeled "Clinical Data," "Laboratory Results" and "During the 2-6 weeks prior to illness." Identifying the specific onset date can help determine when the case was exposed and what the exposures may have been. In this situation, a likely source of exposure for the case was his children since they attend daycare where many of the children, including his own, wear diapers. Although his children appear well, young children are often asymptomatic for HAV infection.
3. Identify close contacts for appropriate prophylaxis (i.e., those who share eating or drinking utensils, cigarettes, food, water bottles, etc.). All household and other close contacts should receive immune globulin (IG) within 14 days of their exposure to the case. In this situation, where you suspect the children may be the source of exposure, the children should also be tested for IgM anti-HAV. However, the administration of IG should not be delayed pending test results. Workplace contacts should be evaluated to identify additional candidates for IG. Since this case is not a foodhandler, no exclusion requirements apply and he may return to work as soon as he is able, usually about one week after onset of symptoms.
4. If the test results indicate the case's children are IgM anti-HAV positive, you should investigate the daycare center, asking the following questions: are there different rooms or classes for infants, toddlers and other children? How many are still in diapers? Are there adequate hand washing and diaper changing facilities? Do the staff float from room to room or do they stay in one area? Is food prepared at the center? Who is responsible for food preparation and or service? Is food prepared by separate foodhandling staff or do the caregivers prepare the food? Is there any illness among other staff or children? Check absentee records of both staff and children. Also, is there illness among other family members of other center attendees?
5. Next, determine who should receive IG at the daycare center. Since the children in this situation are asymptomatic, an infectious period cannot be determined and the 14-day window most likely has passed. However, for practical purposes, it is recommended that the date the blood test was drawn should be used as the date of onset. Since

this daycare center has children in diapers, it is recommended that all children and staff get IG. In addition, new children and employees entering the center for the 6 weeks following the last case should also receive IG.

6. Work with the daycare center on composing informational letters to parents. Ensure that the handwashing facilities are adequate and the staff are aware of the importance of handwashing in preventing this disease and others.

Hepatitis A in daycare settings can be quite challenging. Do not hesitate to contact the Division of Epidemiology and Immunization at (617) 983-6800 for further advice.

Sample letters to parents can be found in the Department's publication *Health & Safety in Child Care*. Fact Sheets and handwashing posters can be obtained from the Division of Epidemiology and Immunization. Information on hepatitis A can also be found at the Centers for Disease Control website www.cdc.gov/ncidod/diseases/hepatitis/a/index.htm and in the Recommendations of the Immunization Practices Advisory Committee (ACIP) *Protection Against Viral Hepatitis*, MMWR, February 9, 1990/Vol.39/No. RR-2.♠

Refugee and Immigrant Health

Refugees in MA

Refugees arriving in the United States (US) often have difficulty gaining access to services, particularly in the health care system. The Refugee and Immigrant Health Program (RIHP) works to increase their access to public health services and to control communicable diseases. Approximately 30 bilingual and bicultural RIHP staff members, who promote culturally and linguistically appropriate services, reach out to these refugees. Because each refugee group possesses unique health beliefs and practices, the community outreach educators become a significant link between the refugee communities and the health care delivery system.

Refugee Arrivals in Massachusetts, 1998

Massachusetts continues to be one of the top 10 states in which refugees resettle. During 1998, the largest number of refugees arrived from the former Soviet Union, Bosnia and Vietnam. The next largest number of refugees came from Somalia, Cuba, Iraq, Liberia, Haiti and Sudan. Overall, 2,478 refugees from 32 countries came directly to MA from overseas, while 76,000 refugees came into the US during the same time period. Approximately 34,000 refugees have arrived in Massachusetts during the last 10 years. See Table 1 at the end of this article.

Domestic Health Assessment

One of the services of RIHP is the domestic health assessment. The objective of this assessment is to address health issues and promote refugee self-sufficiency through comprehensive initial and follow-up visits for all arrivals. Sixteen providers throughout the state deliver health assessment services under contract to DPH. Approximately 90% of refugees arriving in 1998 received a health assessment, compared to 20% in 1995 when services were not delivered through a provider network and Medicaid was the payor.

Health Findings

Among refugees who arrived in Massachusetts during 1998, significant findings from the refugee health assessment include: 45% with tuberculin skin test reactions of $\geq$10mm, 83% with incomplete immunizations, 10% of Africans and 8% of Vietnamese had detectable hepatitis B virus infection, 42% needed follow-up for dental conditions, 22% for vision and 6% for hearing. Dental decay comprised the vast majority of dental abnormalities seen. Among children who arrived in 1995-1998, nearly two-thirds had dental abnormalities.

Pathogenic intestinal parasite infections were identified in 24% of arrivals with the highest rates among Africans, Iraqis, Cubans and Haitians. Prevalences of parasites are underestimated as only a single stool specimen is examined for ova and parasites. Parasites other than *Giardia lamblia* (mainly helminths) were concentrated among refugees from tropical countries. Among African children, for example, 71% had a pathogenic parasite, with many children having more than one. Bosnians with parasites tended mainly to have protozoans such as *Giardia* and *Entamoeba histolytica*.

Anemia is also a common condition among adult and child refugees from most regions. Anemia in refugees is usually due to insufficient dietary iron. Twelve percent of all refugees were anemic with dramatically higher rates among children under 2 years of age (at highest risk for permanent adverse sequelae) and adolescents. Certain regions had unusually high prevalences; for example, 31% of all children from Africa were anemic and among African infants and toddlers, 50% were anemic. It is likely that through destruction of red blood cells, hyperendemic malaria, in addition to iron deficiency in Africa contributes to the high prevalences of anemia.

Growth failure is common among refugee children. In a review of health assessment data from 1995-1998, stunting (or abnormal short stature resulting from chronic malnutrition) was seen in 8% of all children. These included 30% of Southeast Asians, 19% of Iraqis and Kurds and 13% of Africans. Conversely, being overweight was seen most frequently among children from the former Soviet Union and Yugoslavia.

Lastly, chronic medical conditions and mental health problems are seen frequently among adult refugees. Examples include hypertension, cardiovascular disease and diabetes. Often untreated or neglected, these conditions frequently are in an advanced stage. Compounding this is the lack of preventive medical and dental care in home countries. For example, many refugee women have never had a gynecological evaluation or pap smear. Mental health problems typically include various responses to psychological trauma and stress, particularly post-traumatic stress disorder and depression.

Linkage with Follow-up Services

Health assessment providers refer their refugee health assessment patients for primary care or may continue care within their own practices. Many of the conditions first identified during the health assessment are fully addressed in the primary care setting. Others, such as tuberculosis infection, generate a referral to the tuberculosis clinic system for evaluation and treatment, as appropriate. RIHP outreach educators provide support to new arrivals to assist with the transition from initial assessment to primary care. They also serve local health departments to assure access to public health services that is linguistically and culturally relevant.

Additional information on the program is available by calling the Refugee and Immigrant Health Program at (617) 983-6590. ♠

Table 1 - Refugee Arrivals in MA, 1998

Region of origin	Number of countries	Number of arrivals
Former Soviet Union	12	1,147
Eastern Europe	4	570
Asia	4	497
Africa	7	135
Americas/Caribbean	3	80
Near East	2	49
Total	**32**	**2,478**

Kosovar refugees

According to the United Nations High Commissioner for Refugees (UNHCR), by early June 1999 over 850,000 refugees had fled the intense ethnic cleansing in Kosovo. The United States is among the countries participating in the Humanitarian Evacuation Program organized by the UNHCR and approximately 12,000 Kosovar refugees had resettled in the US by mid-August. Refugee processing includes interview and screening, security check, medical examination, sponsorship and admissions inspection.

Kosovar refugees began arriving to Massachusetts in late May. By the end of July, with sponsorship and assistance from a resettlement agency, over 400 refugees had arrived. Complementing resettlement agency staff are large networks of volunteers and state refugee program services.

The US is now participating in the voluntary return of refugees to Kosovo, and some who came to Massachusetts may return home in the coming months. Even so, it is important that refugees complete a health assessment and, as appropriate, receive follow-up health services, particularly immunizations for children and treatment for acute and chronic conditions. Providers should make copies of medical records available for those refugees who opt to return to Kosovo. ♠

Save the dates

Response to Bioterrorism – Role of the Clinical Laboratory
November 1, 1999, 8:30 AM – 4 PM. This conference will define the role of the clinical laboratory, with speakers from public health, the FBI and medical community. This course, sponsored by the National Laboratory Training Network, Centers for Disease Control and Association of Public Health Laboratories, will be held at Baystate Medical Center, Springfield. For more information, call Garry Greer, State Training Coordinator at (617) 983-6285.

Regional TB Update Conference
November 16, 1999, 8:30 AM – 3:30 PM. This conference will be held at the Baystate Medical Center, 759 Chestnut Street, Springfield. The Update will be held from 8:30 AM – 12:30 PM. An optional afternoon session entitled "Contact Tracing and Investigation for TB" will be held from 1:30 – 3:30 PM. For more information, call Evelyn Thomas at (413) 586-7525.

***Chlamydia trachomatis* - With an Eye on Amplification**
November 16, 1999, 1 - 2 PM. This teleconference will focus on the importance of chlamydia screening and testing. It will review amplification techniques including LCX, PCR, and TMA; and discuss considerations in obtaining the best laboratory results. For more information, call Garry Greer, State Training Coordinator at (617) 983-6285.

Surveillance of Vaccine-Preventable Diseases
December 2, 1999, 12:00 PM-3:30 PM. This live, interactive satellite broadcast, to be held at the State Laboratory Institute, Jamaica Plain, will provide guidelines for vaccine-preventable disease surveillance, case investigation, and outbreak control. For more information, call Walter Lasota at (617) 983-6834.

TB Frontline
January 27, February 3 and 10, 2000, 1 – 3 PM. This three-part satellite course is designed to help frontline TB program staff (such as public health nurses and outreach workers) meet the daily challenges of TB elimination and control. The course is free and will be held in several locations throughout the state. CEUs are available to nurses. For more information call the Division of TB Prevention and Control at (617) 983-6970.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 8, No. 1, Winter 2000

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Epidemiology

Antibiotic Resistance Surveillance

Increasing resistance of common infectious agents to antimicrobial drugs is a major public health concern. A growing number of community-acquired infections is occurring due to bacteria resistant to community prescribed antibiotics. This complicates prescribing decisions and increases morbidity and mortality in individuals infected with pathogens more easily treated in the past.

In order to get a clearer picture of what is happening in Massachusetts, the Epidemiology Program in collaboration with the State Laboratory Institute's Bacteriology Laboratory is initiating a statewide antibiotic resistance surveillance project to monitor resistance trends. Data on selected organisms will be collected from hospital and commercial laboratories throughout the state, initially tracking isolates of *S. pneumoniae* and *S. aureus* obtained from sterile sites, and vancomycin-resistant enterococci. This information will be monitored for trends over time and aggregate data will be summarized and distributed to participating hospitals and laboratories.

The Epidemiology Program will also collaborate with the Division of Medical Assistance, the Research Department of Harvard Pilgrim Health Care and other organizations and agencies on behavioral studies and surveillance programs. Peer leaders will emphasize judicious prescribing practices to physicians and other health care staff. Parents will receive educational materials and information on reducing unnecessary antibiotic use through mailings, pamphlets and videos. Prescribing practices, rates of serious bacterial illness, and rates of resistance in selected organisms will be examined. Studies will assess whether community-wide education and promotion of judicious prescribing practices can lead to a reduction in antibiotic resistance in the community.

Immunization

New All Inactivated Polio Vaccine (IPV) Schedule and New Vaccine Information Statements (VISs)

Based on the progress with global polio eradication and the wish to eliminate the risk of vaccine associated paralytic polio (VAPP), beginning January 1, 2000, the Advisory Committee on Immunization Practices (ACIP) is recommending **an all IPV (inactivated polio vaccine) schedule be implemented in the U.S., replacing the current sequential polio schedule.** The routine all IPV schedule consists of four doses given at ages 2 months, 4 months, 6-18 months, and 4-6 years. Per CDC guidance, the Massachusetts Immunization Program (MIP) stopped distribution of OPV (oral polio vaccine) on December 1, 1999. A limited supply of OPV, for use in certain limited circumstances, will be available by special request directly from the MIP, until existing supplies of OPV are exhausted. Providers should no longer continue to use the currently stocked *Polio Vaccines* VIS dated 2/1/99, which describes the sequential polio schedule. The Centers for Disease Control and Prevention (CDC) have published two new VISs for polio vaccine, both dated 1/1/2000, which reflect the new recommendations. The new *Polio Vaccine* VIS should be used with each dose of inactivated polio vaccine administered. A supplemental *Oral Polio Vaccine* VIS should also be used only at those rare times when OPV is given.

Supplies of the new *Polio Vaccine* VIS are available at MIP regional offices and local vaccine distributors. Supplies of the *Oral Polio Vaccine* VIS are only available through special request from the MIP regional offices. Copies of the most up to date VISs, including the new polio vaccine VISs can also be downloaded at: http://www.cdc.gov/nip/publications/VIS/default.htm.

Regional Immunization Updates

The Massachusetts Immunization Program (MIP) is planning regional Immunization Update workshops to discuss new vaccines in development; vaccine ordering, storage and handling; new school regulations; and proper documentation of vaccine administration, including the use of the Massachusetts Immunization Information System (MIIS). Each morning workshop will last for three hours. Contact hours for this program will be provided in accordance with the Board of Registration in Nursing regulations governing continuing education (244 CMR 5.00). Watch for an announcement through the mail, with dates in February and March.

Expected Soon: Pneumococcal Conjugate Vaccine for Infants

Streptococcus pneumoniae, also known as the pneumococcus, is a leading cause of bacterial meningitis, sepsis, pneumonia and otitis media in the United States. Worldwide, more than 1.2 million children die each year as result of pneumococcal disease. Emergence of drug-resistant pneumococci has complicated the treatment of pneumococcal infections. In some areas of the U. S., up to 35% of the isolates of this organism are now resistant to penicillin. A new pneumococcal conjugate vaccine has been designed to stimulate immunity in infants and toddlers, who respond poorly to the pneumococcal polysaccharide vaccine currently used in older children and adults.

Conjugate pneumococcal vaccine, Prevenar™ by Wyeth-Lederle, is close to licensure. It contains the 7 serotypes (4,6B. 9V, 14, 18C, 19F, 23F) responsible for 85 % of the invasive pneumococcal disease and up to 22 % of the otitis media that occur in young children nationwide. According to a study done several years ago in Massachusetts, this 7-valent pneumococcal conjugate vaccine (PCV7) may protect against as many as 95% of the serotypes causing invasive pneumococcal disease in children under 5 years of age (Loughlin, et al., American Journal of Public Health 1995;55:392-394.). The table below summarizes the estimated burden of pneumococcal disease in young children, nationwide and in Massachusetts.

A clinical trial involving close to 38,000 young children enrolled in a large HMO found PCV7 to be 100% protective against invasive disease (including meningitis, bacteremia and sepsis); 73% protective against pneumonia (x-ray-confirmed with consolidation of $\geq$ 2.5 cm); and 10-22% protective against all causes of otitis media (Black. Presented at APS SPR meeting, May 7, 1999, San Francisco; abstr 941.)

At its October 1999 meeting, the Advisory Committee on Immunization Practices (ACIP) reviewed some preliminary recommendations regarding the use of PCV7 in children less than 5 years of age. The schedule for routine immunization of infants will consist of a 4-dose series to be given at 2, 4 and 6 months of age, with a booster at 12-15 months of age. Catch-up immunization schedules requiring fewer doses are being developed for older children through 59 months of age. Because resources and logistical constraints may limit the availability of this vaccine, the ACIP is developing guidelines for prioritization of its use in those groups at highest risk for acquiring pneumococcal disease and experiencing complications.

It is anticipated that PCV7 will be approved some time in early 2000. The Massachusetts Immunization Program (MIP) is currently seeking funding to make this vaccine available in a timely manner. We will keep health care providers informed about the licensure of PCV7 vaccine and when distribution will begin. If you have any questions about PCV7, please call the MIP at 617-983-6800.

Disease Associated with *Streptococcus pneumoniae* in Children Under 5 years of Age

Clinical Presentation	U.S. (cases/year)	MA (cases/year)	Complications
Meningitis	750	15	10-20% mortality, brain damage
Bacteremia	15,250	305	20% mortality
Pneumonia	33,750	675	5% mortality
Otitis Media*	7,000,000	140,000	hearing loss, cognitive impairment

* Up to 35% caused by *Streptococcus pneumoniae*

Eliminating syphilis in Massachusetts

In Massachusetts, primary and secondary syphilis are at record lows (<100 cases expected in 1999) since reporting began in 1918. Nationally, 50% of primary and secondary syphilis is reported from less than 1% of counties (28/3200). The disease is highly localized in the South and in some major cities.

To further reduce syphilis incidence, we must intensify case finding and expand screening in higher-risk groups, such as inmates of jails and prisons. The Division of STD Prevention has received CDC funding to collaborate with the Suffolk County Jail and the Boston Public Health Commission to increase syphilis screening and case finding among the inmates and detainees. There also will be a series of regional meetings with community and professional leaders to obtain advice and establish partnerships for other approaches to achieve syphilis elimination. An advisory group will be established for sustained guidance.

Violence against women and the risk of sexually transmitted disease (STD)

The Advisory Group on Sexually Transmitted Disease and Women's Health, which provides policy and activity guidance to the Division of STD Prevention, had recommended that the Division explore the relationship between violence and STD risk among women.

Assessments conducted between 1997-1999 revealed a high level of violence experienced by female clients of STD clinics. Twenty seven per cent of women in community-based clinics reported experiencing unwanted sex during their lifetime, with half-reporting first occurrence at or before 13 years of age. This number rose to 54% in a prison-based STD clinic, with half of the abuse occurring at or before 10 years of age. In addition, 26% of women attending the community-based clinics and 66% of women in the prison-based clinic reported experiencing partner violence.

These data demonstrate the important role association violence, especially sexual abuse in childhood, has for STD risk. Surveyed women indicated a strong interest in receiving mental health counseling and supportive services either on-site or through referral. They also felt that such services would be helpful in addressing their STD risk.

Several new initiatives have been launched as a result of these data. Division and STD clinic staff have been collaborating in review of current practices regarding violence screening, assessment and referral. Although a number of clinics currently provide screening and referral, there are no formal protocols. A set of standard screening questions have been developed and are under review. Clinics will be assisted in developing resources for referral before a formal protocol is implemented.

Because of the results of the clinic surveys, the Advisory Group convened a special meeting to write a position paper on the relationship of violence and sexual health. It will contain recommendations regarding the work of the Department and other community agencies and groups.

The STD/HIV Prevention Training Center of New England

The STD/HIV Prevention Training Center (PTC) of New England, a project of the Division of Sexually Transmitted Disease (STD) Prevention of the Massachusetts Department of Public Health and the Centers for Disease Control and Prevention (CDC), was established in 1995. This was the first center to serve the New England region (Public Health Region I). It is part of a coalition of ten CDC-funded centers.

The mission of the PTC is the process of continuing education courses in prevention and management of STDs to health care providers throughout New England. In order to achieve this, the PTC works closely with the STD programs of Region I states, as well as with many health care organizations.

The PTC offers experiential courses in the management of STDs for clinicians in practice. These three day courses are held in the Massachusetts General Hospital Genital Infectious Disease Clinic and the Boston Medical Center STD Clinic. A home study module is sent to participant's four weeks in advance to review state-of-the-art information on the prevention, diagnosis and treatment of STDs.

Since inception, the PTC has trained more than 200 medical providers in its three-day courses. In addition, the PTC offers hands-on laboratory courses to increase skills in interpreting stained smears, wet preparations and syphilis serology. More than 300 laboratorians and clinicians have attended these courses. The PTC also offers an annual five-day course for infectious disease fellows.

Ten satellite broadcast programs have been downlinked throughout New England (four of which were produced by the PTC) covering topics such as herpes simplex virus infections, new laboratory diagnostic technologies for the identification of chlamydia and gonorrhea and STD prevention counseling. More than 3000 clinicians have attended these programs over five years. In an effort to meet the needs of providers, the PTC is in the final phase of developing a self-study module on sexual history taking and STD screening recommendations, a videotape on the female pelvic examination and a videotape on wet preparation microscopy skills. In the fall of 1999, more than 150 clinicians participated in the first regional telephone conference. Experts from the University of Washington discussed the new type-specific herpes simplex virus (HSV) serologic tests.

As we enter the 21st century, the PTC hopes to continue its innovative efforts to offer continuing education in the field of STD/HIV prevention in an ever-changing health care environment.

Chlamydia Testing in 1999

The Division of Sexually Transmitted Disease (STD) Prevention has, with support from the federal Centers for Disease Control and Prevention (CDC), instituted a program of intensified chlamydia screening. Since July 1996, the STD Lab of the State Laboratory Institute has provided screening of women seen in nine family planning clinics, two Department of Youth Services secured facilities, two county jails, one homeless shelter and two drop-in HIV service centers. In addition, testing of men in almost all of the STD clinics has increased. The proportion of tests with positive results ranges from 4% in some family planning clinics to 12% in DYS secure facilities. Overall, there has been a 14% increase in the number of cases of chlamydia reported in 1998 compared to 1997, and an 8% increase in the number of cases thus far in 1999 compared to 1998.

STD and HIV Interactions Highlighted in Meetings

A series of six regional meetings was held this autumn to highlight the inter-relationships between HIV and "the other" STDs and begin exploring ways to link categorical prevention activities. Speakers and facilitators from DPH's HIV/AIDS Bureau and Division of STD Prevention combined lectures, panels and small group discussions to: 1)review why STD prevention is important to HIV prevention; 2) describe STD clinical features; 3) outline STD prevention and treatment resources; 4) explain what happens at an STD clinic visit; 5) describe and explain the process and philosophy of partner services; and 6) discuss STD/HIV service integration. The audiences were managers of counseling and testing, prevention and education programs. Evaluations will help shape future initiatives and training. The goal is to increase understanding of respective services and facilitate greater coordination.

TB

Every case was a contact

Contact investigations are important for identifying patients who have recently acquired latent TB infection, who are at greatest risk of progressing to active disease. Latent TB infection (asymptomatic, formerly referred to as "TB infection"), is acquired when contacts become infected with *M. tuberculosis* from an exposure to an infectious TB case. Contacts who are successfully treated for latent TB infection will not become future cases. A designated public health nurse in the town/city in which the TB case resides is responsible, as the direct case manager, for identifying contacts exposed to infectious cases and ensuring these contacts are evaluated and treated. Nurses and epidemiologists from the Division of TB Prevention and Control are available to advise and assist local public health nurses in this process. Susan Logan and Kathy Hendricks manage the TB contact program (Telephone number 617-983-6970).

The local public health nurse plays a critical role in preventing and controlling TB in Massachusetts. The nurse makes important decisions during a contact investigation, for instance, when to start the investigation (sputum smear-positive cases are more urgent), how to prioritize based on the risk of transmission (e.g. the infectiousness of the case and susceptibility of contacts) and how to conduct the investigation systematically. Good interviewing techniques, including sensitivity and cultural competence; the ability to provide education and assess the patient's comprehension; and analytical skills to determine when to expand the investigation will help ensure success. The nurse may be required to ensure immediate evaluation and treatment for some contacts, such as, small children and immunosuppressed people, who are at higher risk of progressing to disease if they acquire latent TB infection.

Collaboration and sharing of resources are necessary in contact investigations. For instance, if a TB patient exposed classmates, the school nurse may combine efforts with the local public health nurse to complete the investigation. The local public health nurse may coordinate efforts with other health departments to locate and treat contacts living outside the community. Teamwork and good communication among all parties involved are crucial to success.

The Division collects and maintains records on all contacts of infectious cases in Massachusetts, and an annual contact report is submitted to the CDC. The CDC has 3 objectives related to contacts that TB programs must strive to achieve: 1) 90% of sputum smear-positive cases will have contacts identified, 2) 95% of contacts to sputum smear-positive cases will be evaluated, and 3) at least 85% of the infected contacts will complete treatment of latent TB infection.

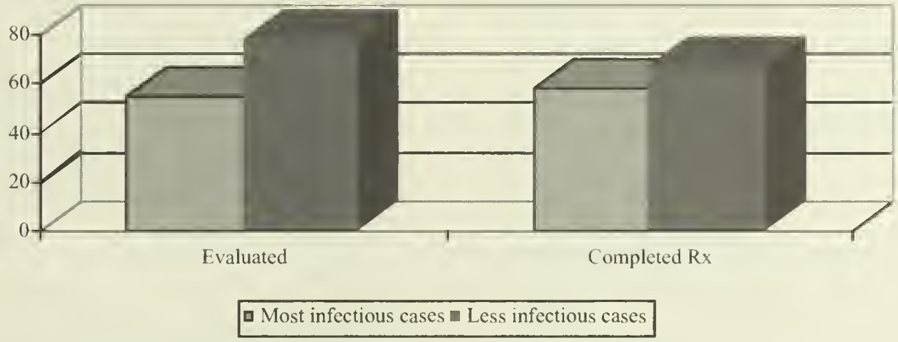
- Contacts were identified for 99% of Massachusetts's cases in 1998, exceeding the CDC objective.
- Only 549 of 992 (55%) contacts of patients with the most infectious form of TB were appropriately evaluated. (see

Figure 1). These evaluation rates were better for contacts of less infectious cases.

- Latent TB infection rates were, as expected, higher in contacts exposed to patients with the most infectious form of TB (25%) compared to those exposed to patients with less infectious TB (9%). Ideally, we should focus on identifying and evaluating the contacts of the most infectious cases.
- Figure 1 also depicts poor completion of treatment rates among contacts with latent TB infection. Overall only 61% of contacts with latent TB infection completed treatment. Fifty-eight percent of contacts to the most infectious cases and 67% of contacts to less infectious cases completed treatment.

Division staff have implemented the following strategies to improve evaluation and completion of treatment rates of contacts: 1) a registry to track the status of contacts has been developed 2) contact management has been incorporated into monthly case reviews and quarterly cohort reviews, and 3) line-listings of contacts due for their follow-up skin tests are being sent to the local public health nurse regularly. We are currently developing several tools (e.g. provider and patient educational materials) that will aid local public health nurses in contact investigations and improve evaluation and completion of treatment rates. A contact investigation workshop has been included in the regional TB updates and a 1-day contact investigation course will be offered regionally to local health department nurses

Figure 1: Contacts evaluated and completed treatment for latent TB infection, Massachusetts (not includingBoston), 1998



TB Update: Central and Western Region

Tuberculosis Surveillance Area (TSA) 1
Nurse: Carol Cahill, RN
Western Region Office, Northampton
Tel: (413) 586-7525

Clinical Services. TSA1 is comprised of communities in the Western and Central regions in Massachusetts. The TB Division funds 7 TB clinics in this largely rural catchment area. These clinics are located in high-risk communities. *A listing of the clinics in the area can be obtained from the Western Regional Office.*

Worcester is the largest city in TSA1. The Getchell/Ward Tuberculosis Clinic is held at Family Health Services, University of Massachusetts Memorial Healthcare City Campus, 26 Queen St., Worcester (508-860-7700). Dr. Jennifer Daly, from the Division of Infectious Diseases and Immunology at the University of Massachusetts Medical Center, serves as the primary clinic physician. Jean Ellis, RN is the clinic nurse. The weekly clinic hours are Tuesdays 7:30 AM to 5:00 PM, and Wednesdays and Thursdays 8:00 AM to 3:30 PM. The Clinic physician is present on Wednesday mornings.

The Worcester Health Department has a strong relationship with the Getchell/Ward TB Clinic. Public Health nurses help staff the clinic. Shirley Pisarski, RN recently retired after 31 years with the Health Department and ten years with the TB Clinic. We wish her well and thank her for her dedication, and welcome Mary Corron, RN who will replace Ms. Pisarski.

The Worcester Health Department and TB Clinic staff collaborate in screening, suspect-case work up, TB case management and the initiation and completion of treatment for latent TB infection. The following Department of Public Health Outreach Educators are available in the area: Wally Rivera (Spanish), Hoang Kim Tran (Vietnamese) and Astrit Seiti (Albanian Kosovar).

Epidemiology: There were 39 cases of active TB in 1998 in TSA 1. Worcester and Springfield each had 8 cases. The remaining 23 cases resided in 15 communities. In 1997, 38 cases of active TB were documented in TSA 1.

New recommendations "*Targeted Tuberculin Testing and Treatment of Latent TB Infection*" will be published in the spring of 2000.

You be the epi

You are the school nurse at an elementary school. Just before lunchtime on the first day of school, a kindergartner with a rash is brought to your office. The rash is maculopapular and vesicular with about 30 lesions, and you find that the boy has a temperature of 102°F. On examining the child's immunization records, you discover that he received DTaP, polio, MMR and varicella vaccines one week ago. You call his father to pick him up and learn that in the morning his father dropped him off at the door leading from the playground directly into the classroom.

The kindergarten teacher is three months pregnant, from Jamaica, and not sure whether she has had chickenpox. There are 17 other children in the kindergarten class. Because it's the first day of school, not all the immunization records are in the students' files yet. Five children do have documentation of having received both MMR (two doses) and varicella vaccines, four have physician-certified documentation of having had chickenpox disease, but eight have nothing health-related in their files yet.

How do you determine what disease this is and the risk to others? What control measures must be implemented?

Analysis

Since there are some vesicles, this is likely some form of chickenpox. The timing of rash onset one week after vaccination makes it a bit difficult to tell whether or not the rash is simply a side effect of vaccination, a condition not considered to be significantly infectious. However, the fact that the boy has a fever and more than 20 lesions makes it unlikely to be a vaccine effect—he probably was exposed to chickenpox prior to vaccination. He should be excluded from school until all the lesions have crusted over, usually by the fifth day.

The teacher must be considered susceptible. (In addition to the lack of immunization or disease history, people from the tropics are more likely to be susceptible to chickenpox than are adults from temperate zones.) She should be referred to her obstetrician, who should draw a blood for a varicella titer and strongly consider administering VZIG. If given within 4 days (96 hours) of exposure, VZIG can attenuate disease and decrease the risk of complications of chickenpox in the teacher (although it is not known whether it will prevent congenital varicella syndrome in the fetus). You should tell the teacher that VZIG can extend the incubation period of chickenpox from 10-21 days to ≥ 28 days, and both you and the teacher should watch for symptoms for at least one month after exposure.

New data indicate that varicella vaccination can prevent illness or modify its severity if given within 3 days (and possibly up to 5 days) of exposure. Therefore, the children without documentation of immunity or immunization should receive vaccine as soon as possible. You should send letters, chickenpox fact sheets, and vaccine information statements home with them today, as well as arranging to talk with parents/guardians at pick-up time.

It appears that no others were exposed. No exclusions are required other than of the case and any subsequent ones. Surveillance should continue for 28 days (extended from 21 because of VZIG) after the last exposure.

Refugee and Immigrant Health

Refugee Health Conference

On October 21, 1999, the Refugee and Immigrant Health Program held its third medical education conference, *Refugee Family Function and Psychosocial Assessment in Primary Care*, co-sponsored with the Massachusetts Medical Society. Seventy people from a wide range of care settings attended. Physicians and staff from refugee health assessment clinical sites, psychologists, social workers and case managers from refugee resettlement agencies heard speakers of local and national renown.

Increasingly, primary care providers serving refugees must assess and meet a broad range of need. At the same time, the sociocultural diversity of refugee arrivals and their distinct histories of flight and trauma present a great challenge. This year's program focused on addressing refugee psychosocial problems in community settings. Conference sessions included "Dynamics of Culture and the Refugee Experience: Implications for Medical Practitioners"; "Resiliency after Psychological Trauma and Opportunities for Primary Care Interventions"; and "Assessment of Traumatized Families in Primary Care Settings." Speakers incorporated case discussions, including those of a traumatized refugee from the Democratic Republic of Congo and a Kosovar adolescent refugee suffering from severe post-traumatic stress disorder.

Additional presentations focused on the extent of and misconceptions about domestic violence in refugee communities and the Department of Mental Health's Western Massachusetts experience developing strategies to increase access to multicultural mental health services for refugees. The conference was well received and laid the groundwork for future conference themes and organization.

Somali Youth Program

Somalia is a country on the Horn of Africa (the east coast). The Somali people are commonly distinguished by the tribe to which they belong. Due to colonization, the more educated may speak Italian in addition to Somali and Arabic. Most Somali are Muslim and learn their Arabic from the Q'uran. It is common practice for women to wear a "hajib" (scarf) to cover the head and to wear a sari. Those who are Muslim eat "halal" (kosher) foods.

Over 1,000 Somali refugees have resettled in Massachusetts since 1992. Most have come from camps in Kenya where many lived for over three years and often much longer. As displaced persons, they arrive to the US with many health concerns, related to both physical and mental well being. Somali youth have particular needs that result, in part, from school having been interrupted by war and camp stays. Some arrived with no school experience, unable to read and write in their own language.

The Somali Youth Program was initiated in 1996 with funding from the federal Office of Refugee Resettlement to address many of these issues with educational, health, social, and recreational services. The program is a collaborative of the International Rescue Committee (lead agency), the Refugee & Immigrant Health Program and the Somali Women and Children's Association. The program is located at English High School in Boston.

The Refugee and Immigrant Health Program provides technical support to the program's Somali Health Educator. She coordinates health workshops and offers drop-in hours and tutoring services. The health workshops are designed to engage youth. They offer information and opportunities to discuss their own experiences, knowledge from home and new challenges in the US. Differences in culture and what the youth believe to be their immediate needs are also discussed, helping to address mental well being. Topics have included universal precautions, HIV/AIDS, tobacco prevention, substance abuse prevention, and violence prevention.

Violence prevention was an early objective of the program. Somali refugee youth, caught between two cultures, were seen as being at risk for alienation and violence. The Health Educator has linked Somali youth with violence prevention training, including that facilitated by the Prevention Center in Boston. Through the training and ongoing discussion, youth have been able to address issues related to feeling threatened. Skill building has focused on strategies to avoid dangerous situations and to safely negotiate a way out of such situations.

As Somali youth are exposed to American culture and media, some healthy behaviors may be adopted. Although smoking is not common in Somali culture, some teens have started smoking, responding to the perceived need to be accepted or just to be "phat" (cool). Tobacco prevention workshops help the youth grapple with marketing, image and peer pressures while also learning that it is an unhealthy behavior.

The drop-in hours are a great asset to Somali youth. They have many concerns that they are not comfortable speaking about in a foreign language and with a stranger from another culture. The Health Educator can provide culturally competent assistance, keeping in mind the Somali and American cultures as well as the standards of the school. Serving as liaisons, all Somali Youth Program Somali staff provide school personnel with information about Somali culture to prevent misunderstandings or misperceptions regarding behavior.

Program staff assist youth to enroll in area summer programs, including mainstream and refugee-specific programs. Other youth have begun to build work experience through summer jobs. Program summer activities are most often recreational and social, building on activities that help foster positive, healthy relationships amongst peers while opening new horizons.

The Somali Youth Program has been integral to newly arrived Somali youth's understanding of American society and acculturation. Teachers and staff have seen marked improvements in their educational and social achievements.

Save the dates

Epidemiology and Prevention of Vaccine-Preventable Diseases

March 23 & 30, April 6 & 13, 2000, 12:00-3:30 PM. This four-part satellite broadcast will provide a comprehensive overview of vaccines commonly used in the United States. Vaccine recommendations change frequently. CME credit, CNE credit and CEUs are available for completing the entire series. State Laboratory, Jamaica Plain.

Module 1: Principles of Vaccination, General Recommendations and Immunization Strategies..
Module 2: Diphtheria, Tetanus, Pertussis, Poliomyelitis and an update concerning Rotavirus and the vaccine situation.
Module 3: Measles, Mumps, Rubella and Varicella.
Module 4: Hepatitis B, Haemophilus influenzae type b, Influenza and Pneumococcal Disease.

The course uses, as its required and reference text, The PINK BOOK. The revised 6th edition will be available in March 2000, in time for the course. It will be sent to you, once you purchase it from the Public Health Foundation at http://bookstore.phf.org/ for $25.00.

For more information, call Walter Lasota at (617) 983-6834.

5th MIAP Skills Building Conference:

May 18, 2000, 9:00 AM – 4:30 PM. This conference will be held at the Holiday Inn, Worcester. For more information call MIAP at (617) 451-0049 x806.

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Save the dates Continued:

Antibiotic Resistance: A Global Problem with Local Solutions

May 2, 2000, 8:30 AM – 5:00 PM. This conference will be held at the Sheraton Needham Hotel, Needham, MA. The conference is sponsored by the Alliance for the Prudent Use of Antibiotics, the American Association for World Health, the Massachusetts Medical Society, the MA Department of Public Health and a number of other organizations. CMEs will be offered. For more information call: Jacki Dooley at (617) 983-6559.

STD/HIV Prevention Training Center of New England

The STD/HIV Prevention Training Center of New England (PTC) has scheduled the following trainings between March and May of 2000:

3-Day Clinical STD Trainings for Clinicians: March 27-29; April 22-24; May 22-24
Brightfield Microscopy: April 26
Stained Smears: April 26
National Satellite Broadcast of "STD Grand Rounds: Genital Dermatology"; March 9

For more information about these and other PTC activities, call Wendy Hylton at (617) 983-6945.

Regional TB Update Conference

May 28, 2000, 9:00 AM – 3:00 PM. This conference will be held in the Southeast Region, location TBA. For more information call the Division of TB Prevention and Control at (617) 983-6970.

Adult Immunization Conference:

May 1, 2000: For more information, contact Lorraine LeClerc at MassPRO, (781) 890-0011 x276.

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Howard K. Koh, MD, MPH, Commissioner

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Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 8, No. 2 Spring 2000

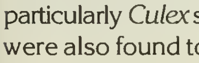
Summary of West Nile Virus in the United States

In early August 1999, cases of encephalitis of unknown cause occurred in residents of New York City. At the same time, bird die-offs involving large numbers of birds were observed. On September 14, virus isolated from a crow in New York City (NYC) was identified as West Nile virus (WNV). This virus was also determined to be the cause of disease in humans. On October 18, the Centers for Disease Control and Prevention (CDC) confirmed WNV in a horse with signs of encephalitis on Long Island, New York.

During the outbreak, which began in early August and ended in mid-October, 62 humans were clinically ill with WNV encephalitis. Seven died. All of the human cases occurred in NYC, and Nassau and Westchester Counties in New York. In addition, 23 cases of WNV disease were identified in horses in New York state. Mosquitoes, particularly *Culex* species, and many species of wild birds were also found to be carrying WNV. Bird cases have been identified in New Jersey, Connecticut, New York and Maryland. Bird cases were found as far north as Columbia County, New York which lies on the Western border of Massachusetts. No infected mosquitoes, birds, horses, or humans were identified in Massachusetts in 1999.

Sporadic and epidemic WNV infection occurs in Africa, India, Australia, Egypt and the Middle East, and occasionally in Eastern Europe. Until this summer, WNV had never been identified in the Western Hemisphere. It is not known how WNV was introduced into the US. It may have been imported through an infected human, bird or mosquito.

In early 2000, WNV was found by the CDC to have overwintered in mosquitoes, and the virus was detected in a bird from New York. Because of concerns about the ability of WNV to establish itself in the Eastern United States, the CDC is funding state programs along the East Coast to conduct surveillance for WNV in birds and mosquitoes.



During the spring, summer and fall of 2000, the Massachusetts Department of Public Health (MDPH) will conduct statewide mosquito surveillance for WNV, as well as test wild birds, and suspect human and horse cases. Also, MDPH will be conducting public education campaigns on how to reduce the chances of being bitten by mosquitoes. Health care providers and public health officials can help educate the public about WNV disease and prevention. For a list of prevention measures, look for the West Nile Virus Fact Sheet and the fact sheet on mosquito prevention tips on the MDPH website www.state.ma.us/dph/.

For an excellent, detailed, and comprehensive summary of the West Nile Virus outbreak, visit the USDA's Veterinary Services website at www.aphis.usda.gov/vs/ep/WNV/summary.html. Additional information can also be found on the Centers for Disease Control and Prevention (CDC) website at www.cdc.gov/.

Eliminating Syphilis

In the new millenium, the United States is faced with a unique opportunity to eliminate syphilis within its borders. Syphilis is easy to detect and cure, given adequate access to services and treatment. In the U.S. as well as in Massachusetts, syphilis is at the lowest rate ever recorded and its ocurrence is very localized geographically. Almost 50% of all of the infectious syphilis reported in the United States in 1998 came from less than one percent (28) of 3200 counties. Where syphilis does persist, it disproportionately affects Americans living in poverty.

Syphilis elimination is not only technically feasible, but can have far-reaching public health implications by removing consequences, such as increased likelihood of HIV transmission, spontaneous abortion, stillbirth, and multi-system disease in congenitally acquired infections, etc.

The persistence of of syphilis in parts of the U.S., an industrialized nation with one of the best

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Epidemiology

Lyme Disease in MA: Surveillance Update

Lyme disease is the most commonly reported vectorborne disease in Massachusetts, accounting for more than 93% of all reported vectorborne cases. The Massachusetts Department of Public Health (MDPH) has been conducting passive Lyme disease surveillance since 1985. In addition to passive surveillance, in May 1999, MDPH implemented an active surveillance system involving eight regions around the state. Providers in each of these regions were identified, recruited, provided one-on-one education on Lyme disease, andthen contacted on a bi-monthly basis to collect Lyme disease case reports. With assistance from local boards of health, MDPH successfully recruited 34 provider sites into the active surveillance program. The table summarizes preliminary surveillance data for Massachusetts by county for 1999. All but three counties (Suffolk, Worcester and Franklin) had annual incidence rates at or well above the national mean rate of 5.5 cases per 100,000 population.

During the upcoming Lyme disease season, MDPH will encourage all providers and boards of health to report all cases of Lyme disease, recruit additional providers within the active surveillance regions, and potentially add new regions. We anticipate that increased surveillance efforts will lead to more accurate disease reporting and a better understanding of the distribution and burden of Lyme disease in Massachusetts.

Lyme Disease Incidence Rates In Massachusetts by County, 1999**

County	Number of Confirmed Cases	Incidence Rate Per 100,000
Barnstable*	111	54.1
Berkshire	28	20.9
Bristol	52	9.9
Dukes*	37	283.9
Essex	118	17.3
Franklin	0	0.0
Hampden	48	10.5
Hampshire	27	17.3
Middlesex	81	56.6
Nantucket*	68	103.2
Norfolk	55	8.8
Plymouth*	92	20.1
Suffolk	15	2.2
Worcester	32	4.3
State Total	**764**	**12.3**

*** County populations during Lyme disease season (i.e. summer) is much higher than in other seasons, therefore incidence rates based on actual population at risk would be lower.**
** Preliminary surveillance data (Updated 4/2000).

The Massachusetts Health Alert Network

With the advent of cheaper and more sophisticated information technology, the ability to connect key public health agencies into one seamless integrated communications and data exchange system now exists. A key effort will be the Health Alert Network, a web-based cross-jurisdiction communication and data-sharing system. The Internet serves as a cross-platform infrastructure that allows multiple computer applications and data streams to flow quickly and cheaply between any connected individual or agency. The Health Alert Network will also be used for online training of state and local personnel involved in public health response. It will address needs for rapid bi-directional communication between agencies and local health capacity building.

For further information on this initiative contact Tim Broadbent, MPA, at (617) 983-6800 or via email at timothy.broadbent@state.ma.us

Eliminating Syphilis

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health care systems in the world, is a sentinel public health event. Many communities at risk are communities of color, with African-American communities disproportionately affected.

Elimination of syphilis would be a landmark achievement because it would directly improve the health of many Americans and address a glaring racial disparity in health. It would also provide a symbolic redress of the legacy of the Tuskegee Study and neglect of rigorous measures to address syphilis. It will require that we build (or rebuild) basic public health capacity to control infectious diseases and ensure reproductive health.

The Centers for Disease Control and Prevention (CDC), with the assistance of professional, academic, and community advisors, issued The National Plan to Eliminate Syphilis in the United States. The goal is to reduce the number of primary and secondary syphilis cases to less than 1000 per year by 2003. Strengthened infrastructure to recognize and investigate cases, can ensure that transmission does not occur beyond initial cases. There are two cross-cutting strategies: 1) enhanced surveillance; and 2) strengthened community involvement and partnership. This second strategy was missing in the first two National Plans, formulated in 1936 and then again in 1961. Specific intervention efforts include 1) rapid outbreak response; 2) expanded clinical and laboratory services; and 3) enhanced health promotion.

In Massachusetts, the Division of STD Prevention has responded to the plan with several steps. All intervention strategies and policies will be reviewed. Gaps in surveillance will be identified and fixed. Progress on every syphilis investigation will be monitored. Syphilis serology screening will be enhanced in the jails and other sites where higher risk people might be found. The number of tests performed at the Suffolk County Jail has already increased. Finally, the Medical Foundation will convene and staff a multi-disciplinary Syphilis Elimination Advisory Group that will advise the Division and allies on strategies and progress. Affected communities will have direct involvement in policies and elimination activities, particularly in the health promotion arena.

1999 STD Summary

Sexually transmitted diseases (STD) continue to be a problem despite progress in prevention and control. There was a 36% decline in the number of cases of infectious syphilis reported in 1999 (97) compared to 1998 (150). This historically low number is an indication of the possibility of eliminating syphilis in Massachusetts within the next few years (see companion piece in this issue). However, the number of cases of gonorrhea increased from 2258 in 1998 to 2487 in 1999. This 10% increase was driven by an increase in the number of cases among teens and young adults.

Case interview data reveal an association with drug use as a common factor in many of these cases. Also, Massachusetts had a 7% increase in the reported number of cases of chlamydia in 1999 (8926) compared to 1998 (8363). This is partially the result of intensified efforts to offer screening to people who would ordinarily not have access to medical care or laboratory services.

The Division of STD Prevention and the State Laboratory's STD Laboratory, with increased federal funding, extended screening to two more jails, several Department of Youth Service lock-up facilities, and two HIV multi-service centers. Being able to test more effectively for an infection that most often occurs without symptoms allows infections to be diagnosed early, before more damaging and difficult to treat complications occur.

STD Trends in Massachusetts, 1990-1999

Disease	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Inf. Syphilis	1175	1013	700	440	278	223	262	187	150	97
Congenital Syphilis	14	5	6	6	6	2	7	1	6	1
Gonorrhea	7531	5984	3580	3099	3156	2658	2163	2077	2258	2487
Chlamydia	12251	10891	9804	8333	8049	7402	6791	7330	8363	8926
Pelvic Inflammatory Disease (total)	702	623	504	486	468	318	204	166	198	281
Chancroid	27	2	13	2	1	7	2	4	0	1

Refugee Admissions FY2000

The U.S. considers for admission as refugees, persons of special humanitarian concern who can establish persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group or political opinion. The Refugee Asmissions Program for FY2000 has a ceiling of 90,000 admissions distributed regionally. The largest numbers are allocated to Europe (37,000), including the Former Yugoslavia, Kosovo and Former Soviet Union. The African ceiling has increased to 18,000. Ceilings in other regions are E. Asia (8,000), Near East/S. Asia (8,000) and Latin America/Caribbean (3,000), with an additional 6,000 as an unallocated reserve. Complete information is available at the Department of State website - www.state.gov/www/global/prm/prm_update.html. Approximately 3% of the refugees admitted to the U.S. have resettled in Massachusetts.

Immunization

MIP Honors Sites for Reaching Year 2000 Goal!

The Massachusetts Immunization Program (MIP) has been conducting practice-based assessments since 1993. Over the last seven years the MIP has honored 69 practices for reaching the Healthy People 2000 goal for immunization levels at or above 90% for their two-year-old patients. Recent National Immunization Survey results indicate that Massachusetts continues to have one of the highest immunization levels in the nation at 89%. Congratulations to the following practices for achieving the HP 2000 goal:

- Pushpa Agarwal, MD
- Bass River Associates
- Bowdoin Street Health Center
- Cambridge Pediatrics
- Cape Cod Pediatrics
- Child Health Associates-Auburn
- Chestnut Hill Pediatrics
- Coastal Primary Care, PC
- Community Health Center of Franklin County
- Concord Hillside Medical Associates
- Brian Dempsey, MD
- Dowd Medical Associates
- East Boston Neighborhood Health Center
- East Cambridge Health Center
- Ell Pond Medical Associates-Melrose
- Family Care of Tewksbury
- Rhonda S. Fogle, MD
- Franciscan Children's Hospital & Rehabilitation Center
- Garden City Pediatric Associates, Inc.
- Geiger-Gibson Community Health Center
- John H. Gould, MD
- Laurie Grauel, MD
- Greater Roslindale Medical & Dental Center
- Hanover Pediatrics, PC
- Harvard Vanguard Medical Associates-Cambridge
- Healthcare South Pediatrics-Hanover
- Healthcare South/Scituate Pediatrics
- Robert Hertzig, MD, Michael Gerrity, MD, Amy Griffin, MD
- Holden Pediatrics
- Holyoke Pediatric Associates, LLP
- James Hoye, MD, Kelly Hoye, MD
- Richard J. Kerbel, MD
- Lexington Pediatrics, PC
- Liberty Tree Pediatrics-Danvers
- Little House Health Center
- Macony Pediatrics
- Manet Community Health Center-Houghs Neck
- Manet Community Health Center-Snug Harbor
- Manet Community Health Center-North Quincy
- Anders Martenson, III, MD
- Medical Associates-Leominster
- Medical West Associates-Chicopee
- Medical West Associates-Springfield
- Merrimack Valley Pediatric Associates-Billerica
- Middleboro Pediatrics
- Burt E. Minaker, MD
- Patricia Moffatt, MD
- Leo R. Muido, MD
- Walter J. Murphy, Jr., MD
- North Shore Pediatrics-Beverly
- Pediatric Associates at Northwoods
- Pediatric Associates of Greater Salem
- Pediatric Associates of Norwood
- Pediatric Professional Associates, PC-Methuen
- Pediatric Services of Springfield, Inc.
- Joseph Smith Community Health Center
- South County Pediatrics-Webster
- South Cove Community Health Center
- South End Community Health Center
- South Shore Pediatrics-Weymouth
- Sumner Pediatrics, PC-Springfield
- The Neponset Health Center
- Tri-County Pediatric Associates-Stoughton
- Union Square Family Health
- George F. Viteck, MD, John Kelley, MD, Katherine Eisenmenger, MD
- Walpole Pediatric Associates, PC
- Western Massachusetts Pediatrics-Holyoke
- Woburn Pediatric Associates
- Worthington Health Center of Hilltown Community Health Centers, Inc.

New Immunization Guidelines Now Available

The Massachusetts Immunization Program (MIP) announces that three new guidelines are now available.

- Adult Immunization Guidelines
- Childhood Immunization Guidlines
- Guidelines for Vaccine Administration

Although the Childhood Immunization Guidelines have been issued each year, this is the first year that adult and general vaccine administration guidelines (which provide a general guide to site, route and spacing of vaccinations) have been issued. The guidelines are available on the DPH website at www.state.ma.us/dph or through the MIP regional offices.

Plan Now for the 2000-2001 flu season!

The Advisory Committee on Immunization Practices (ACIP) recently recommended that **everyone 50 years of age and older receive an annual influenza vaccination.** This will result in increased demand for flu vaccine next fall.

The Massachusetts Department of Public Health will purchase 730,000 doses of influenza vaccine, 45,000 more than last season. As in previous years, however, **state-supplied vaccine will not be sufficient to meet all the demand for flu vaccine.** All providers are urged to plan now for the next flu season:

- **Take into account the new addition of everyone 50–64 years of age** when determining your need for flu vaccine. State-supplied vaccine for adults is prioritized for high-risk adults attending public clinics or residing in long-term care facilities. State-supplied vaccine for adults seen by private providers will be limited.
- **Plan to purchase additional doses of influenza vaccine** if you will need more vaccine than you received from the Massachusetts Immunization Program (MIP) last year. Submit your orders for flu vaccine to your usual pharmaceutical distributor or to the following manufacturers as soon as possible:

Aventis Pasteur	1-800-822-2463
Wyeth-Lederle	1-800-358-7443

Private providers and local health departments are encouraged to collaborate on coordinatng administration of flu vaccine in their communities. For more information, call (617) 983-6828.

You be the epi

You are the public health nurse (PHN) and TB case manager in a large town. You receive a phone call from the local hospital informing you of a discharge, that day, of a "suspect" TB patient. The patient, a 16 year-old male, was admitted to the hospital with complaints of night sweats, fever and cough. He had been treated for pneumonia three months ago. Sputum smears are highly positive for acid fast bacilli, there is 17 mm induration on a PPD skin test and he has an abnormal CXR showing pneumonia and a right lower lobe cavity. Four antituberculosis drugs were started three days ago. How do you prevent further transmission? What should be included in this discharge plan (from hospital to community) that will ensure the community is not put at-risk. How do you conduct the contact investigation for this patient?

Analysis

Discharge Plan:
Hospital discharge planning should begin upon admission of a patient with suspected or confirmed tuberculosis. At least two weeks of appropriate and effective treatment, usually four drugs and three consecutive negative sputum smears with symptom reduction would ensure that the patient is no longer infectious. Since this patient has had three days of treatment, the patient cannot be discharged (105 CMR365.600) until an appropriate discharge plan has been developed in cooperation with the hospital case manager and local PHN and TB case manager. This plan should include:

1. A pre-discharge home visit by the local PHN to evaluate the home environment. A potentially infectious patient cannot be discharged unless the home environment is safe with no household contacts with a high-risk of progressing to TB disease, e.g., infants or immunocompromised persons.
2. Evaluation of the patient to identify potential risks for nonadherence to treatment
3. Interventions for appropriate medical, nursing, and community follow up

Contact investigations should include the determination of the:

1. Infectiousness of the case
2. Duration and frequency of exposure and risk of transmission to others
3. Environmental characteristics – Are conditions crowded and conducive to transmission?
4. Susceptibility of the contacts – Are they at greater risk of progressing to disease?

With a hospitalized, potentially infectious patient, the initiation of the contact investigation should begin at the same time as the initial case assessment and continue upon discharge. Careful interview of the suspect and his family, on more than one occasion, may identify potential close contacts and exposure locations. Arrange for a bilingual/bicultural Outreach Educator, if necessary, to visit the family and friends to help in identifying close contacts and to address issues and concerns. Consultation with the TSA Nurse is recommended.

The contact investigation should include:

1. Screening close contacts (individuals who have shared air with the patient for a prolonged period of time) in the following categories – household, school/work and social.
2. Contacts with positive TB skin tests (documented converters) should be evaluated and treated for latent TB infection.
3. When there is evidence of transmission (documented converters) among the close contacts, screening should be expanded to include less close and more casual contacts.

Interviews with this patient as well as a review of his medical chart indicate that the patient has been symptomatic since late summer. In careful consideration of the characteristics and activities of this patient (adolescent, high school student) it was noted that prolonged exposure might have occurred among his classmates and/or close friends, and thus, the risk of transmission is high among this group.

Initial screening of close contacts

Household contacts

1. Test all people living in the patient's residence.
2. The results were: three of the five family members were PPD positive and did not recall being positive in the past
3. Refer those with a positive skin test for a CXR and medical evaluation
4. Repeat the skin test for the two family members who are initially skin test negative, 8-12 weeks post-exposure, as it can take that long for a vigorous immune response.

Close social/work/school contacts

1. Determine if there are contacts outside the immediate household, e.g., part-time job, volunteer activities or team sports.
2. Determine if other students, teachers, friends, coworkers need to be screened.

Contact investigation expanded to include casual contacts after evidence of conversion

> *The three documented converters among the household contacts show there is evidence of recent transmission and the investigation should be expanded beyond the immediate household.

Refugee and Immigrant Health

Summary of Refugee Health Statistics, 1999

During 1999, Massachusetts received 2361 newly arrived refugees from 22 countries, including parts of the former Yugoslavia (923, mainly Bosnia and Kosovo) and Soviet Union (770, mainly Russia and Ukraine). Other countries were Vietnam (256), Somalia (131), Cuba (58), Liberia (57), and Haiti (53). Refugees undergo two health screenings during their migration process. The first occurs overseas and the second, within 90 days of arrival in the U.S.

The overseas evaluation is designed to identify health conditions that may pose a threat to the public health of the U.S. It targets specific communicable diseases, mental illness associated with violent behavior, and substance abuse. Significant findings are categorized as Class A (excludable) or Class B (a significant disease, defect, or disability which will require follow-up in the U.S.) Among Massachusetts arrivals rates of Class A and B conditions varied widely by region/country of origin (*See Table 1*).

In Massachusetts, refugees undergo screening at clinical sites with MDPH Refugee Health Assessment Program contracts. Clinicians perform a comprehensive medical history and physical examination, administer needed vaccines, and complete screening tests, including complete blood counts, urinalysis, hepatitis B serology, blood lead level, stool microscopy for ova and parasites, and a PPD tuberculin skin test. Clinicians also perform a visual inspection of dentition and gross assessment of hearing and visual acuity. The two most common medical conditions detected through screening were latent tuberculosis (TB) infection (50% of all tested with positive PPD skin test and dental caries (45% of all screened). Prevalence rates of intestinal parasites and anemia varied widely by regional/national origin. *See Table 2.*

Among 1801 refugees who presented a single stool specimen, microscopy revealed 809 parasites in 517 stools (29% of all tested). Of the parasites detected, 288 (36%) were pathogenic strains. Among the pathogenic parasites detected most frequently, helminths included *Ascaris* (5%), *Trichuris* (33%), hookworm (5%), and dwarf tapeworm [*Hymenolepis*] (2%). Protozoans included *Entamoeba histolytica* (9%) and *Giardia lamblia* (45%). Helminth infections tended to be concentrated among refugees from Asia and Africa. Protozoans were more evenly distributed, including among refugees from the temperate Eastern European and former Soviet countries.

Anemia was more highly prevalent among Africans, particularly young children. This is most likely due to both significant undernutrition, with iron deficiency and hemolytic diseases such as malaria. Of note, however, are high rates of anemia also seen among children from the former Soviet Union. While African children more commonly have had evidence of growth failure (13% height-for-age and 8% weight-for-height), the former Soviet children tend toward overweight. When coupled with their high rates of anemia, a pattern of abnormal growth and nutrition similar to that of low-income U.S. children emerges.

Based on exam and historical findings, clinicians diagnosed an additional 1244 medical conditions, which were not previously identified during the overseas examination, clustered in 36% of 2028 refugees who completed the assessment. Significant morbidity was found due to cardiovascular disease (19% of diagnoses; 12% of refugees), anemia (13% of diagnoses; 12% of refugees), genitourinary abnormalities (11% of diagnoses; 7% of refugees), and dermatologic diseases (10% of diagnoses; 6% of refugees).

While refugees come to the U.S. with significant health problems, most are treatable and short term. The Refugee Health Assessment promotes rapid access to health care services and the transition into on-going primary care for preventive care and follow-up of both acute and chronic conditions diagnosed during the health assessment process.

Table 1: Class A & A Conditions	Africa	Americas	Asia	Nr. East	Frmr USSR	Frmr Yugo	Total
TB-Related Conditions	8	0	43	0	44	33	128
Total # Conditions	109	3	52	3	503	138	805
# Refugees w/ Conditions	69	3	51	1	206	100	430
Total # Refugees	231	116	277	43	770	924	2361
Rate/1000 Refugees	472	26	188	70	653	149	341

Table 2: Health Conditions on Arrival	Africa	Americas	Asia	Nr. East	Frmr USSR	Frmr Yugo	Total
# Assessments	154	77	216	17	695	869	2028
+PPD	51%	43%	40%	47%	45%	58%	50%
+HBsAg	15%	0%	12%	0%	3%	1%	4%
+O & P (any)	38%	58%	37%	59%	13%	34%	29%
Anemia	32%	18%	6%	0%	10%	11%	12%
Dental Disease	41%	27%	36%	47%	40%	54%	45%

New Guidelines on Targeted Testing and Treatment of Latent TB Infection

"Preventive treatment" or "isoniazid (INH) prophylaxis" were the terms commonly used in the past to refer to the practice of treating certain PPD skin test positive individuals, who had no evidence of active tuberculosis, to prevent future reactivation. Evolving strategies for TB control and elimination foresee a larger role for what is now called "targeted testing and treatment of latent TB infection."

In April, 2000, the American Thoracic Society (ATS) and the Centers for Disease Control and Prevention (CDC) published as a supplement (in *The American Journal of Respiratory and Critical Care Medicine 2000; 161(No. 4, part 2:S221-247)*) new guidelines for targeted testing and treatment of latent TB infection. In addition to greater emphasis on treating latent infection, the new guidelines include other important changes from prior official recommendations. The following are annotated highlights. (For drug dosages and other details, readers are referred to the published guidelines):

- A greater role for primary care providers in testing and treating latent TB infection.
- *Targeted testing* of high-risk persons rather than *general screening* of all persons. However, determining who is at high enough risk to test should be based on local epidemiologic data, i.e., where are the cases in your area coming from? Testing of persons not at high risk for TB is discouraged due to the poor predictive value of the tuberculin skin test under those circumstances. In low-risk populations, many persons testing 10 to 12 mm will not have TB infection.
- *Testing* for latent infection to be linked to *treatment. If you would not treat, do not test.*
- Changes in the recommended treatment regimens to make them both more effective and safer for a wider range of patients. There are now 4 recommended treatment regimens, two of which are based on rifampin rather than INH (see below).
- *Clinical monitoring* of treatment by symptom checks at least monthly (rather than routine laboratory monitoring) is recommended for most patients, with certain exceptions detailed in the guidelines.
- Guidelines for *HIV-positive patients* have been published (MMWR 10/30/98; 47:RR-20) and recently updated (MMWR 3/10/2000; 49:185-189). These include recommendations for minimizing interactions of the rifamycins with protease inhibitors or nonnucleoside reverse transcriptase inhibitors.

Changes in recommended treatment regimens:

- On the basis of greater efficacy, the optimal treatment duration for *INH* is now considered *9 rather than 6 months* for adult, pediatric, HIV-positive and HIV-negative persons, and persons with abnormal chest x-rays consistent with old TB. Although INH has always been recommended for high-risk persons *at any age*, non-INH (rifampin-based) regimens, less likely to cause hepatitis, can now be considered. (see below).
- 2 months *rifampin and pyrazinamide (PZA)* is recommended as an alternative regimen to 9 months of INH. Because INH is not included, concern about age-related hepatitis is greatly reduced. This regimen and a rifampin-only regimen of 4 months duration may be preferable for patients over age 35. However, rifampin accelerates the metabolism of many other drugs, including coumadin, methadone and birth control pills. Drug interactions may be a relative contraindication to using rifampin in some pa-

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Northeast regional TB update

Tuberculosis Surveillance Area (TSA) 3
TSA Nurse: Nancy Taylor Flynn, RN, BSN

Epidemiology: In 1999, there were 60 verified TB cases in TSA 3.

Clinical Services: TSA 3 is comprised of communities in Essex County and a portion of Middlesex County. There are four TB clinics located at the following hospitals: Saints Memorial Medical Center in Lowell, Lawrence General Hospital in Lawrence, Malden Medical Center in Malden and Salem Hospital in Salem. Physicians and Health Department/VNA nurses staff these clinics. A listing of the names and referral numbers of the clinics can be obtained from the Tewksbury Regional Health Office at (978) 851-7261.

Higher risk communities in TSA 3 include the following: Lawrence, Lowell, Lynn, and Malden. The TSA nurse assigns community outreach educators to these high-risk communities on a priority basis. They provide many diversified services and are a great asset to the Division of TB Prevention and Control. Services may include but are not limited to medication monitoring, documentation of patient encounters, adherence checks (e.g. pill counts etc.), sputum collection and health education. The following education programs are provided: Mantoux testing and interpretation (lecture and demonstration), TB 101, TB Update, and others as requested.

TB Community Prevention Project: The Division of TB Prevention and Control has initiated a community-based TB prevention project in Malden. The project focuses on TB prevention in the Chinese community. Wendy Eng has been hired as the part-time Chinese Health Liaison at Healthy Malden 2000. Wendy speaks both Mandarin and Cantonese and is a welcome addition to the Community-Based Prevention Project.

CD UPDATE
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Pandemic Flu Planning

July 13, 2000: CDC/NIP Satellite Course. For more information, contact Walt LaSota at (617) 983-6834.

Response to Bioterrorism

The Alabama Department of Public Health is offering a three-part satellite conference on their state's response to bioterrorism. All satellite conferences are from 1:30 - 3:30 Central Time.

May 25, 2000: The Environmental Impact
July 27, 2000: Pulbic Health & Hospitals Working Together
September 12, 2000: What Is Your Role?

For more information fax Darlene Ruffin at (334) 206-5640 or register online at www.alapubhelath.org/alphtn/.

Immunization Update 2000

September 14, 2000, 9:00 - 11:00 AM. This satellite broadcast will provide the most current information available in the constantly-changing field of immunization, especially information on new vaccines and new immunization requirements. It also emphasizes routine immunizations and standard immunization practices. For more information contact Walt LaSota at (617) 983-6834.

Northeast Regional TB Update

September 28, 2000. Location and time TBA. For more information, contact the Division of TB Prevention and Control at (617) 983-6970.

New Guidelines for TB Infection, continued from page 7

tients and may require dosage adjustments in the other agents, i.e., protease inhibitors and rifamycins.

- *Six months INH* is still considered an acceptable (but less effective) treatment duration for HIV-negative adults with normal chest x-rays who are unwilling or unable to take 9 months of INH. In addition, some providers may conclude that the 6-month INH treatment is the preferred duration for their patient population.
- Four months *of rifampin alone* is suggested as an alternative for patients unable to take INH or PZA.

It is likely that the use of these new guidelines will significantly change the treatment of latent TB infection in Massachusetts. As questions arise, please call Dr. Nardell at (617) 983-6970, or (617) 665-1029.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 8, No. 3 Summer 2000

GOVERNMENT DOCUMENTS
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SHIGELLA SONNEI OUTBREAK REINFORCES THE IMPORTANCE OF HANDWASHING

Handwashing is the single most effective tool in limiting the spread of infectious diseases that are transmitted from person-to-person. Today's hectic lifestyles sometimes interfere with incorporating proper handwashing as part of our daily routine. It is especially important to teach children how to wash their hands properly. In June, the Division of Epidemiology and Immunization sent a newly developed curriculum and poster to elementary schools to aid in education on the importance of handwashing in disease prevention.

This initiative follows a large *Shigella sonnei* outbreak that occurred in the Hampden County area during 1999 and affected over 550 persons; the majority, children less than 10 years old. Shigellosis is a diarrheal disease that is very contagious and is easily transmitted person-to-person by the fecal-oral route. It appears that the outbreak started with one or two point sources and continued by person-to-person spread.

The handwashing curriculum is appropriate for kindergarten through sixth grade. The handwashing poster (also available in Spanish) can be used as a teaching aide as well as hung in bathrooms, on bulletin boards or in other places Additional copies of the materials are available and can be requested by fax (617-983-6840) or in writing (see address below). Due to a limited supply, we ask that schools request no more than 7 of each item per school.

Address for schools to request handwashing materials:
Handwashing Materials
MA Department of Public Health
Division of Epidemiology and Immunization
305 South St.
Jamaica Plain, MA 02130

INFLUENZA VACCINE SHORTAGE ANTICIPATED (8/1/00)

As the result of difficulties in growing this year's influenza A(H3N2) vaccine component and other manufacturing problems, there is likely to be a substantial delay in the distribution of influenza vaccine and possibly substantially fewer total doses of vaccine for distribution than last year. In order to mitigate the impact of the anticipated vaccine shortage, the Massachusetts Immunization Program (MIP) encourages all providers to adhere to the following recommendations:

1. Prioritize Vaccine
When vaccine becomes available, it will likely be delivered in partial shipments. Facilities should develop contingency plans to ensure that both state-supplied and privately-purchased vaccine is administered first to people at highest risk of complications from influenza. These people include everyone 65 years of age and older, and younger people with underlying medical conditions. If and when additional vaccine becomes available, it should be administered to care givers and household contacts who could transmit influenza to those at risk for complications from influenza.

2. Vaccinate Throughout the Flu Season
In New England, influenza season does not usually begin until December and does not peak until February. This year more than ever, influenza vaccine can and should be administered throughout the influenza season.

3. Schedule Organized Clinics No Earlier than November
Because delays in vaccine delivery are anticipated, large organized immunization clinics should not be scheduled until November. Residents of long term care facilities and high-risk patients seen for routine care or who are hospitalized should be immunized as soon as vaccine is available. This is particularly important for young children at high risk who are receiving influenza vaccine for the first time and therefore require two doses.

4. Manage Existing Vaccine Supplies Carefully
Minimizing wastage of vaccine is very important. Health

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Epidemiology

HEALTH CARE PROVIDERS ENCOURAGED TO DISCUSS MENINGOCOCCAL VACCINE WITH COLLEGE-AGE PATIENTS

On October 20, 1999, the CDC's Advisory Committee on Immunization Practices (ACIP) modified its recommendations for the use of meningococcal vaccine in college students. The ACIP now recommends that medical care providers provide information to college students and their parents about meningococcal disease and the benefits of vaccination. In addition, vaccination should be offered to freshman students. Other undergraduate students may also choose to be vaccinated. This change is the result of data from on-going studies that suggest freshman students living in dormitory settings may be at a moderately higher risk for invasive meningococcal disease than age-matched non-students or students living off campus.

The Massachusetts Department of Public Health encourages health care providers to talk to their college-age patients and parents about meningococcal disease, meningococcal vaccine, and the specific circumstances of the student. Although routine administration of meningococcal vaccine to all college students is not recommended, meningococcal vaccine may be appropriate for certain students depending on their living conditions and behavioral exposure risks. *Neisseria meningitidis* is spread through direct contact with oral or nasal secretions of a carrier. A setting such as a college dormitory, combined with high-risk behaviors in college students (alcohol consumption, exposure to tobacco smoke, sharing food or beverages, activities involving the exchange of saliva, etc.), may cause some college students to be at greater risk for invasive infection. Health care providers should discuss these risk factors when evaluating patients for the administration of meningococcal vaccine.

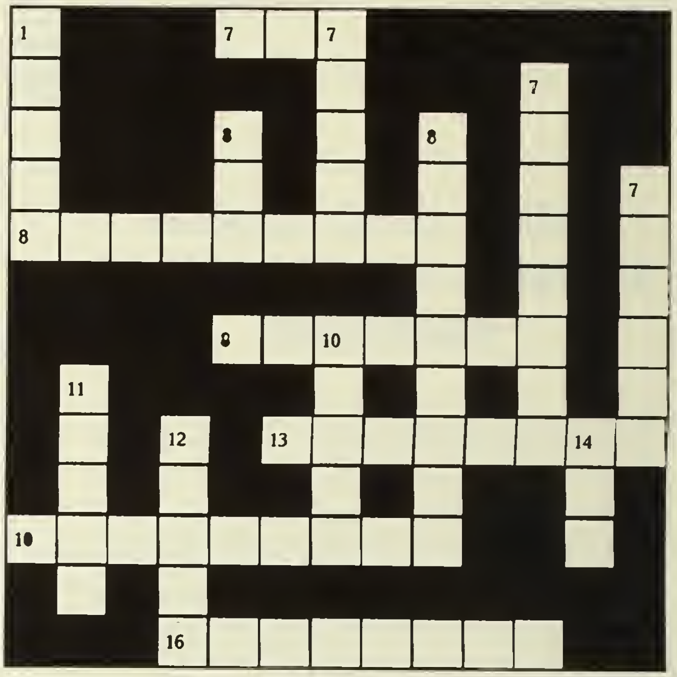
NEW MDPH HEPATITIS C WEBSITE!

Starting in July 2000, the new website for the Massachusetts Department of Public Health Hepatitis C Program is:

www.masshepc.org

The site contains information on hepatitis C for medical providers, the general public and people living with the infection.

Communicable Disease Crossword



Across

2. An animal that carries rabies but whose bite is so small exposures are sometimes not apparent.
8. A vaccine preventable disease that is increasing in Massachusetts.
9. One thing that a person with chronic hepatitis C infection should abstain from.
13. The type of disease that is passed from animals to humans.
15. The scarring of the liver that can occur with hepatitis infection.
16. The disease that was the first to be eradicated worldwide through immunization.

Down

1. Besides clipping, what you should never do to needles prior to disposal.
3. The vectors that transmit Lyme disease to humans.
4. What someone gets when their own zoster virus is reactivated.
5. A disease you must be vaccinated against every year.
6. One of the most important things someone can do to prevent infection.
7. A virus that is fatal in humans, often transmitted by animals.
10. A kind of bird that are very susceptible to West Nile virus infection.
11. A disease currently under target for global eradication.
12. The category of pathogen that antibiotics will not work against.
14. The antibody test that indicates if a person has current hepatitis A infection.

ADOLESCENT PROJECT CONTINUES IN SPRINGFIELD

The Springfield Adolescent Health Project has continued its work to prevent STDs in the Springfield area through multi-faceted and community-driven training programs. This project began in 1993 in response to the high rates of syphilis and other STDs in the area. A coalition of affected communities, local and state health departments, Baystate Medical Center and the University of Massachusetts School of Public Health came together under the auspices of the Community Health Network Area (CHNA) to deal with this issue. It was decided at the outset that the effort would be shaped by youth, since they were disproportionately affected by STDs.

The youth began by developing and administering an assessment of the knowledge, attitudes, behaviors and beliefs (KABB) of their peers regarding STDs, associated behaviors, availability of services, and sources of information about sex, sexuality and STDs.

The survey, completed in 1994, had three major findings:

1.) youth did not have a firm understanding about STD, risk behaviors and protective behaviors;
2.) youth chose not to go to medical services because they did not feel the clinicians took their concerns seriously; and
3.) although youth learned about STD-related topics from the media and friends, they preferred to learn of such matters from their parents.

The project developed three efforts. The first was peer outreach. The second was outreach to clinicians to teach them how to improve their success when working with teens. Finally, began to look for ways to teach parents and other adults how to speak to their children about sex, sexuality and STDs.

In 1999, the CDC made a three-year funding commitment. In the past year, the project developed capacity to train 30 youth to participate in outreach. The youth have piloted a revised KABB and administered it to several hundred youth. They are about to initiate a mailing to clinicians to assess their comfort levels when working with youth. Finally, they have had the first of several focus groups with parents and other adults to begin to shape a questionnaire for parents. In between all of these, the youth have provided numerous outreach activities at conferences, community events, on the street, and over the airwaves on TV and radio. They have also been filmed as part of a documentary being made for PBS. They will be presenting two aspects of their work at the annual meeting of the American Public Health Association.

PATIENTS SATISFIED AT STD CLINICS

The Division of STD Prevention conducted its first patient satisfaction survey in many years in order to obtain feedback from patients about different aspects of clinical services. The survey was designed with input from the field investigative staff as well as from clinic nurses. The survey was sent to each of the clinics. Every patient seen in a one month period was to be given a questionnaire before leaving the clinic. At the time of this newsletter, eight clinics of the eleven had completed their surveys. In all, 362 questionnaires were returned.

The responses were overwhelmingly positive. The majority of patients were satisfied with the services that the clinics provide.The waiting time was deemed to be satisfactory for most (302/341) respondents. Only 39 thought the waiting time was too long, The single largest group (179/361) were referred to the clinic by word of mouth. The response was an almost unanimous "yes" when asked if they understood the clinicians written and verbal instructions. The same was true when the patients were asked if their privacy was respected and if they were treated with respect. Respondents were unanimous that they received good care and they would recommend the clinic to a friend.

SURVEYING THE COLLEGE SCENE

The Division of STD Prevention (DSTDP) will conduct a survey of college health clinics this summer to assess the types and levels of STD prevention services available to students. A rich body of literature speaks of the prevalence of higher risk behaviors among college students. The survey will focus on the availability of on-site clinical diagnostic and screening services; the availability of HIV counseling and testing; STD/HIV/reproductive health counseling; billing mechanisms for such services; peer education program on campus; clinic involvement in those activities; and clinical staff is involvement in teaching courses or other venues. The results of this survey will be used to develop appropriate STD prevention programming for our campuses.

Immunization

VACCINE AVAILABILITY UPDATES

Pneumococcal Conjugate Vaccine Now Available

On February 17, 2000, the FDA approved Wyeth-Lederle's pneumococcal conjugate 7-valent vaccine (PCV7) Prevnar™ to prevent invasive pneumococcal disease in infants and young children. The Massachusetts Immunization Program (MIP) is providing this vaccine to all pediatric providers. PCV7 is recommended for the routine immunization of all children < 24 months of age and some children 24-59 months of age who are at high-risk for invasive disease. For more information about the schedule and other guidance about the use of PCV7, please consult the package insert. Additional information is also available at www.aap.org (American Academy of Pediatrics) and www.pneumo.com (Wyeth-Lederle, edited by Jerome Klein, M.D.).

Thimerosal-Free HibTiter® Vaccine Now Available

The MIP announces the availability of thimerosal-free HibTiter® vaccine. The new formulation is supplied in a package of four single dose vials. This formulation will replace the current 10-dose vial of HibTiter®, which does contain thimerosal. Please continue to use the 10-dose vials until your inventory of this product is depleted.

The Massachusetts Immunization Program is conducting **enhanced surveillance of invasive pneumococcal disease** in children <5 years of age. We urge you to **report all cases in this age group** to your local BOH and the MIP at (617) 983-6800.

NEW PROVIDER ASSESSMENT INITIATIVE

The most recent National Immunization Survey (7/98-6/99)results indicate aggregate immunization levels in Massachusetts are relatively high, with 83% of the state's two-year-olds fully immunized with 4 DTaP, 3 polio, 1 MMR, 3 hib, and 3 hep B . However, studies of communities at-risk of lower rates of immunization have revealed pockets of lower rates.

The Massachusetts Immunization Program (MIP) is embarking on a new initiative designed to expand the number of private providers that we visit to assess immunization levels, vaccine storage and handling practices and compliance with the requirements of the Vaccines for Children (VFC) Program. The MIP has streamlined the assessment and will employ the methodology of lot quality assurance (LQA) to determine whether a practice might benefit from a more detailed assessment. This will allow the MIP to focus individualized evaluation and quality improvement efforts on those provider sites in greatest need of assistance.

The new LQA methodology requires only 50 randomly sampled charts to be reviewed from each practice's two-year-old patient population. Each child is assessed for completness of schedule and whether the practice consistently uses the VFC screening forms. If 10 or more under-immunized children are identified, the MIP will return to review additional charts and identify mechanisms for improvement. The new assessment methodology, combined with a comprehensive vaccine management assessment will typically take no more than half a day to complete, compared to approximately 3 days for the traditional practice-based assessment (PBA).

Influenza Vaccine Shortage Anticipated - Continued from Page One

care providers should refrain from over-ordering or hoarding vaccine. Any unused state-supplied vaccine should be returned to the regional immunization offices for redistribution in order to decrease the amount of vaccine returned unused.

5. Administer Pneumococcal Vaccine When Appropriate
Pneumococcal vaccine is effective in preventing invasive pneumococcal disease, a common complication of influenza. People at risk for pneumococcal disease include everyone 65 years of age and older and younger people with chronic medical conditions. Pneumococcal vaccine is available at no cost from the MIP for all Massachusetts residents at risk for pneumococcal disease. For more information, contact your regional immunization office or the MIP at 617 983-6800.

Adult immunization should be a core component of primary medical care. Clinicians should assess patients' need for recommended immunizations, including pneumococcal and annual influenza immunization in the context of on-going medical care whenever possible.
The voluntary cooperation of health care providers and the public is essential to minimize the adverse impact of an influenza vaccine shortage by ensuring that the available vaccine is administered first to those who need it most. The MIP will continue to provide information on the supply of influenza vaccine, as that information becomes available. Please check the Department of Public Health web site at www.state.ma.us/dph for updated information.

You be the epi

You are a clinician with a patient population that includes immigrants. A three year-old Dominican child (DOB 1/17/97) presents for his first primary care visit. His family has no immunization records but states he was fully immunized and that they will obtain a record from the Dominican Republic. They return a few weeks later with the following record: DTP & Polio (3/17/96, 4/17/96, 5/17/96, 9/25/98), Hepatitis B (1/17/96, 3/17/96, 6/17/96), Measles (11/23/96), and BCG (1/17/96). The date of the fourth DPT/OPV was written in a different section of the record in different handwriting.

- What problems with this record do you identify?

There appear to be two issues with this record. First, the dates are mostly prior to the child's date of birth and, second, the vaccines are all on the same day of the month. When you ask about these, the family responds that their relative who requested the record from the clinic had great difficulty in getting a clerk to provide the record and had to try multiple times. They say that at each of the child's visits in early infancy, the doctor instructed them to come back in one month and scheduled the visits on the same date each month.

- What evidence might support the family's assertions?

One fact that supports the family's claim is the correct dose intervals by World Health Organization (WHO) guidelines. In addition, if "1997" is substituted for "1996", the child has received a typical complete overseas vaccine panel. The fourth DTP, clearly recorded by a different person, is documented at the appropriate time based on the child's true age. Lastly, the family gave a plausible explanation for the discrepencies.

- How can you confirm the vaccination or immunity?

Serologic testing can confirm immunity in some cases; although clinicians must be careful not to miss opportunities for vaccination when it is unlikely that a child has received a vaccine. Serologic testing would confirm immunity to hepatitis B, varicella, measles, mumps, and rubella.

- How should you assess the child and what vaccines should you administer?

MMR: Your patient will need two doses of MMR, given now and after age 4 years. While the measles vaccine follows WHO recommendations, it does not meet U.S. Advisory Committee on Immunization Practices (ACIP) standards because it was given prior to age 1. The Massachusetts Immunization Program (MIP) follows ACIP guidelines. Further, the child was vaccinated with the monovalent measles vaccine and has not received mumps or rubella vaccination.

DTP & Polio: The child should receive primary series per the standard ACIP/MIP catch-up schedule. While it may be that the child received the first three DTP & Polio doses, unless the record shows accurate dates, it is not accepted as valid.
Hepatitis B: Serologic testing would confirm receipt of the hepatitis B vaccine.
Hib: The child should receive one dose of Hib vaccine.
Varicella: The child needs varicella assessment and possibly vaccination.

Commentary

For immigrants with documentation of prior vaccination, clinicians must carefully read the documents to interpret their validity and compliance with U.S. immunization schedules as set by the ACIP. In general, only written documentation is acceptable and this should include the month and year of administration.

Clinicians must also be careful to identify which vaccines were used overseas. For example, many countries do not use the combined Measles-Mumps-Rubella vaccine, instead relying on vaccines for the individual components. In addition, in some languages the same name is used for multiple diseases, e.g., measles and chicken pox. Among immigrants in Massachusetts this is an issue for Cape Verdeans, in whose creole language the word *sarampo* is used for both diseases instead of the Portuguese words for chicken pox, *catapora* or *varicela*.

Problems with documentation may include questionable dates or valid dates that reflect WHO guidelines, but which are not considered acceptable doses by ACIP guidelines. Documentation of excessive vaccination for a particular vaccine may also be seen. In some instances this may reflect national "vaccine days" to promote immunization; in other instances, improper documentation. Clinicians must use their judgement based on the entire vaccine record.

In summary, clinicians caring for foreign-born patients may encounter a variety of irregularities involving immunization documentation. In interpreting overseas immunization records, clinicians must use reasonable judgement while adhering to public health and immigration regulations for vaccination requirements. Given recent evidence of high societal costs of overimmunization (Feikema SM, et al. *JAMA.* 2000;283:1311-17), clinicians should emphasize sound interpretation of vaccine records, utilization of serologic testing when appropriate, and adherence to standardized vaccine guidelines to reduce unnecessary vaccination while ensuring individual and societal protection from vaccine-preventable diseases.

Refugee and Immigrant Health

ADDRESSING LANGUAGE ACCESS TO HEALTH SERVICES

While English is the dominant language in the United States, it is estimated that about 32 million people, 13.8% of the population, speak a language other than English in the home. Communication is essential to the delivery of health services and the control of disease, yet it can be difficult even when all parties speak the same language. Language access and cultural competence of health care services further challenge both health care organizations and newcomer communities. Highlighted below are several initiatives that begin to respond to these issues.

At the federal level:

- **Office for Civil Rights: Guidance Memorandum on Title VI Prohibition Against National Origin Discrimination – Persons with Limited-English Proficiency**

  The Office for Civil Rights (OCR) is the Federal agency that is responsible for enforcing civil rights laws and statutes, including Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color and national origin. In January 1998, OCR issued a guidance memorandum on Limited-English-Proficiency to ensure consistent application of Title VI to health and social services programs with federal funding.

  According to the memorandum, programs have the responsibility "for ensuring that their policies and procedures do not deny or have the effect of denying persons with limited English proficiency equal access to federally assisted health, medical and social service programs, benefits and services for which such persons qualify." It further states that, "the key to ensuring equal access to benefits and services, is to ensure the service provider and the limited English proficient client can communicate effectively....Recipients [of federal funds] are more likely to utilize effective communication if they approach this responsibility in a structured rather than on an ad hoc basis."

  The OCR guidance provides recommendations on the provision of interpreter services, as well as on compliance and enforcement. The memorandum is available from the OCR website: www.hhs.gov/progorg/ocr/lepfinal.htm.

- **Office of Minority Health: Proposed Culture and Language Access Standards**

The Office of Minority Health (OMH), U.S. Department of Health and Human Services, recently released 14 draft standards for culturally and linguistically appropriate services (CLAS) in health care. The draft standards were developed to provide guidance to health care providers as they strive to prepare for, and respond to, the needs of diverse patients. They are recommendations and not mandates.

The CLAS standards are based on review of key laws, regulations, contracts, and standards currently in use by federal and state agencies and national organizations, and were developed with a national advisory group. Among the standards are recommendations to use a variety of methods to collect and use accurate demographic, cultural, and epidemiological data for racial and ethnic groups; to utilize formal mechanisms for community and consumer involvement in the design and execution of service delivery; to provide all clients with limited English proficiency access to bilingual staff or interpreter services; and to require ongoing education and training for all levels of health care staff.

Following a public comment period, the revised CLAS will be issued in the fall of 2000. The CLAS and accompanying commentary are available at the OMH website: www.omhrc.gov/clas.

At the state level:

- **Chapter 66 of the Acts of 2000: An Act Requiring Competent Interpreter Services in the Delivery of Certain Acute Health Care Services**

  On April 14, 2000, Governor Cellucci signed into law H.4917, the "Emergency Room Interpreter Bill". The new law requires that all hospitals, public or private, which operate acute care, either in emergency rooms or in acute psychiatric services must use competent interpeter services when treating non-English speakers. The provisions of the law go into effect July 1, 2001, so that those hospitals that do not currently meet these requirements will have ample time to develop and implement services. The Massachusetts law is consistent with the OCR guidance.

Answers to Crossword Puzzle on Page 2:
Across 2. Bat, 8. Pertussis, 9. Alcohol, 13. Zoonosis,
15. Cirrhosis, 16. Smallpox.
Down 1. Recap, 3. Ticks, 4. Shingles, 5. Flu, 6. Washhands, 7. Rabies, 10. Crows, 11. Polio, 12. Virus, 14. IgM

ENDING NEGLECT: THE ELIMINATION OF TB IN THE UNITED STATES

Institute of Medicine Report, April 2000

In April of this year, the Institute of Medicine (IOM) released a report on tuberculosis (TB) elimination. This report was written by a committee of individuals with expertise in tuberculosis, ethics, public health policy, disease eradication, state correctional health services, international health and infectious diseases.

The Committee's charge was to:

- **Review and assess:** the current state of tuberculosis in the United States, the challenge of TB in the foreign born, the state of TB research, multiple drug resistant (MDR) TB and contributory factors, and the U.S. role in global TB control.
- **Develop conclusions and recommendations as to:** the framework needed for national TB elimination, region-specific action steps; research needs; information for providers and the public, federal, state and local responsibilities; and, strategies for the U.S. contribution to global TB control leading to elimination.

The report addresses the history of the neglect of tuberculosis in the United States and the resultant consequences of disease resurgence and drug resistance. It provides a blueprint for changing strategy . It acknowledges the role of public health and proposes a strong mandate for the strengthening public health services.

There are seven general conclusions: 1)maintain control while adapting to declining incidence, 2) speed the decline through increased targeted treatment of latent TB infection, 3) develop the tools needed for eventual elimination: diagnostic tests for latent infection, new drugs and a vaccine, 4) increase U.S. engagement in global efforts, 5) assure education and training of patients, providers and the public, 6) mobilize support, and 7) measure progress at the highest government level.

The IOM report acknowledges the variability of TB programs and local epidemiology in implementing the proposed strategies. However, TB elimination will require that all programs reassess their current efforts and be flexible and creative in adapting to change. It suggests that "Careful attention be paid to ensuring that tuberculosis control programs become what they need to be, rather than maintained as they have been."

For further information and copies of the Report contact: The National Academy Press (800) 624-6242 or (202) 334-3313. www.nap.edu/reading room (full text). For general information on the report and tuberculosis: www.nationalacademies.org/includes/tb.html. Executive Summaries of the Report are also available through the MDPH Division of TB Prevention and Control (617) 983-6970.

SOUTHEAST REGION UPDATE

TB SURVEILLANCE AREA (TSA) 5

TSA NURSES: JOAN THOMPSON-ALLEN, RN, BS

The Division welcomes Joan Thompson-Allen, who is the new Tuberculosis Surveillance Area nurse for this region. She has replaced Christine Jackson who resigned last year. Joan has thirteen years of experience in communicable diseases and over twenty years in nursing.

Anne Bernard retired in July. We are sorry to say good-bye to Anne, who has provided support services for the region. We wish her the best.

Epidemiology: In 1999, there were 49 cases of TB in TSA 5, which represented 18 % of the 270 cases statewide. The highest case rates were in Brockton (14.01) and Quincy (8.24).

Clinical Services: TSA 5 is comprised of communities in southeastern Massachusetts, including the Cape and the Islands. The TB Division funds seven clinics. Clinical services are currently provided at: Brockton Hospital; Cape Cod Hospital in Hyannis; Morton Hospital in Taunton; St. Anne Hospital in Fall River; Olympus Specialty Hospital in Braintree; South Coast at St. Luke Hospital in New Bedford; and Sturdy Memorial Hospital in Attleboro.

Clinic spotlight: The TB clinic at Morton Hospital offers a unique model, incorporating the clinic into the office of Dr. Cindy McCrone, an infectious disease specialist (508-828-6733). Patricia Jordan provides nursing services for clinic patients. The office manager, Carol Upham provides support services. The clinic is held the third Wednesday of the month from 1:00 to 4:30 P.M. Pharmacy and radiology services are on-site. Kathleen Driscoll from the Taunton Board of Health provides TB skin testing, nursing case management and community follow-up.

Outreach Services: There are currently one full-time and two part-time outreach educators in the region. Yin Leung primarily serves the Chinese community in Quincy and the northeastern part of the region. Eddy Bien-Amie and Leandro Fortes regularly attend the Brockton clinic and provide services primarily to the Haitian and Cape Verdean communities in the Brockton – Randolph areas. There is a vacancy in the New Bedford – Fall River area for a part-time outreach educator to provide services to the Portuguese and Hispanic communities.

Educational Activities: The annual Regional TB Update was held May 25, 2000 at the Paul Dever Development Center in Taunton.

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Save the dates

Immunization Update 2000

September 14, 2000, 9:00 - 11:00 AM. Rebroadcast 12:00 - 2:30 PM.
This satellite broadcast will provide the most current information available in the constantly-changing field of immunization, especially information on new vaccines and new immunization requirements. It also emphasizes routine immunizations and standard immunization practices. For more information contact Walt LaSota at (617) 983-6834.

2000-2001 Adult Immunization Week Kick Off

October 10, 2000, 11:00 AM. Nurses Hall, The State House, Boston, MA. Sponsored by the MA Coalition for Adult Immunization. For more information, contact David Gray at (617) 983-6800.

Building Healthy Communities Together

October 4, 2000, 9:00 AM - 4:00 PM. Hoagland Pincus Conference Center, Shrewsbury, MA. A conference to discuss public health issuses faced by Immigrant and Refugee communities. For more information, contact the Office of Refugees and Immigrants at (617) 727-7888.

Surveillance for Vaccine Preventable Diseases 2000

December 8, 2000. Baystate Medical Center in Springfield, MA. For more information, contact Helen Taugher of the MDPH Immunization Program at (413) 545-6600 or via email at helen.taugher@state.ma.us.

STD/HIV Prevention Training Center of New England

The STD/HIV Prevention Training Center of New England has scheduled the following trainings between September and November 2000:
3 Day STD Intensive: September 18-20; October 23-25
Brightfield Microscopy: September 19; October 24
Stained Smears: October 17
Syphilis Serology: November 8
For more information call (617) 983-6940.

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Communicable Disease UPDATE

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Why patients complete TB therapy – according to the patients and according to their case managers

Non-adherence with anti-tuberculosis treatment has been identified as a major factor in treatment failure, relapse, and the emergence of drug resistance. Ensuring that nursing case management and clinical services provide care that promotes adherence is a primary goal of the TB Division. Recently, the Tuberculosis Surveillance Area (TSA) nurses and the Boston Public Health Commission conducted a study to determine which factors were important to patients in completing therapy. These findings were then correlated with the factors that the case managers (local board of health nurses assigned to the TB cases) felt were important.

Patients rated the importance of 25 factors in assisting them with completion of therapy. They pertained to clinical services and to attitudes and beliefs known to affect adherence. Trained surveyors administered patient questionnaires. After completion of the patient questionnaire, a comparable questionnaire was mailed to the patient's case manager to rate the importance of the same factors. Forty percent (73/183) of the patients and eighty-eight percent (64/73) of the case managers completed the questionnaires.

Patients rated 'respect from providers' as the most important factor in treatment completion. Other frequently cited factors included: free medications, physician involvement, desire to be cured, feeling they had no choice, protection of their privacy, family desires, patient education, outreach educator involvement and directly observed therapy (DOT). The following three factors were cited by patients, but not identified by the case managers: DOT, family desires and patients feeling they had no choice. Through open-ended questions, patients and case managers agreed the following were the most important factors: family support, outreach educator involvement, DOT, home visits made by the nurse and/or outreach educator, teamwork of the health care providers, and their own personal motivation for cure. Patients and case managers agreed the following were the most difficult factors in treatment completion: taking the medication (duration, quantity, side effects, etc.), accepting the diagnosis, being available for DOT, feeling of isolation/being shunned by friends, and ease of accessing transportation to clinic.

We thank all the patients and case managers who took the time to complete the survey. We hope the survey results provide useful feedback to health departments and suggests ways to assist patients in completing treatment. The survey results underscore the importance of research to develop new treatment modalities that will decrease both the duration of treatment and side effects. Showing patients the utmost respect is essential to treatment completion and achieving the goal of TB elimination.

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Refrigerated Vaccine Storage: Colder is Not Better

There might be a problem in your office that could affect the stability and efficacy of vaccines, the temperature at which you store your vaccines. Many people believe that as long as vaccines are in a cold refrigerator, everything is fine. This is not true! The proper storage temperature range (35°F to 46°F or 2°C to 8°C) must be maintained and monitored by checking and recording the temperatures on a log sheet *at the beginning and end of each work day*.

As part of routine quality control, the Massachusetts Immunization Program (MIP) has conducted more than 300 vaccine management assessments at provider offices over the past three years. It has been found that 13% of these providers are

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Epidemiology

Summary of West Nile Virus in Massachusetts

West Nile (WN) virus infection is caused by WN virus, a flavivirus previously found only in Africa, Eastern Europe, Australia, and West Asia. Mild infections are common and include fever, headache, and body aches, often with skin rash and swollen lymph glands. Severe headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions, paralysis, meningitis, encephalitis and occasionally death indicate more severe infection. Notable clinical illness with WN virus infection occurs in about 2-5% of exposed individuals. West Nile virus infection mortality ranges from 3% to 15% of hospitalized cases (higher rates among the elderly.)

An outbreak of WN virus infection, which is a mosquito-transmitted, was identified for the first time in North America in New York during the summer of 1999, causing illness and death in people, birds, and horses. Other states known to be affected in 1999 were New Jersey, Connecticut, and Maryland.

In the spring of 2000, the Massachusetts Department of Public Health (MDPH) began conducting statewide surveillance for WN virus. Birds, mosquitoes, human and horse specimens were tested at the State Laboratory Institute (SLI) in Jamaica Plain, Massachusetts. Also, the MDPH informed health care providers, veterinarians and local boards of health about WN virus disease testing and prevention.

In late July 2000, WN virus was isolated from an adult dead crow found on July 22nd near Willow Pond in Jamaica Plain. By October 1st, more than 210 birds tested positive for WN virus in Massachusetts.

After detecting WN virus in birds in Massachusetts, the MDPH implemented active surveillance for human cases of encephalitis and meningitis and began screening suspect cases for WN virus infection. Suspect cases include patients with fever and clinical evidence of encephalitis, meningitis or meningoencephalitis (not of bacterial etiology), with or without other neurologic signs, symptoms, or rash. As of October 1st, more than 200 human specimens were tested for WN virus infection, but no human infection was documented.

As of October 1st, one (1) horse from Middlesex County, with symptom onset on August 26th, and 4 pools of mosquitoes collected in Suffolk and Norfolk Counties have tested positive for WN virus.

For a list of prevention measures, refer to the *West Nile Virus Encephalitis Fact Sheet* and the *Steps You Can Take To Prevent West Nile Virus Encephalitis* information sheet on the MDPH website at www.state.ma.us/dph/. For a detailed and comprehensive summary of the WN virus outbreak in the United States, visit the USDA's Veterinary Services website at www.aphis.usda.gov/vs/ep/WNV/summary.html. Additional information can also be found on the CDC website at www.cdc.gov/.

Tularemia on Martha's Vineyard

Since early July, the Massachusetts Department of Public Health (MDPH) has been investigating a cluster of tularemia cases among full- and part-time residents of Martha's Vineyard. Tularemia, sometimes referred to as "rabbit fever" after its most common reservoir, is a relatively rare zoonotic disease caused by the bacterium *Francisella tularensis*. The disease can be transmitted from direct or indirect contact with numerous mammals, the bites of ticks or deer flies, the consumption of contaminated food or water, or inhalation of the infecting organism. Clinical presentation will vary depending on the route of transmission and the infecting strain. During this most recent outbreak on the Vineyard, the majority of cases (64%) have had lung involvement.

Tularemia has been reported sporadically on Martha's Vineyard since rabbits from the west were introduced sixty years ago. Between 1990 and 1999, 17 cases of tularemia were reported to MDPH, with the majority coming from the Cape and Islands region.

On July 5th, MDPH was notified of two suspect cases of pneumonic tularemia occurring among residents of Martha's Vineyard and by mid-July three additional suspect cases were reported. At that time, MDPH notified hospital infection control practitioners and local boards of health on Martha's Vineyard, Nantucket and Cape Cod, as well as all medical providers on both Islands, of the cluster of tularemia cases. On July 18th, MDPH requested assistance from the Centers for Disease Control and Prevention (CDC) in investigating the cluster. Officers from the Epidemiologic Intelligence Service (EIS) traveled to Massachusetts, where they interviewed all cases and attending physicians, and performed retrospective case finding on Cape Cod and the Islands. Environmental samples were also taken. Results from this initial investigation did not uncover any common source of infection; however, it appeared that persons recently involved in outdoor occupations, such as landscapers or construction workers, were at an increased risk.

By mid-August, MDPH was investigating six confirmed pneumonic tularemia cases. Because at this time two of the confirmed cases had occurred in part-time residents of Martha's Vineyard who had sought medical care outside of the Vineyard, MDPH notified all emergency room physicians statewide of the tularemia cluster. At the end of August, MDPH issued a public health advisory to all Martha's Vineyard residents and visitors

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STD Education Efforts

The Division of STD Prevention (DSTDP) has renewed its commitment to educating HIV service providers about sexually transmitted diseases. A recent survey, sponsored by the Massachusetts HIV Prevention Planning Group (MPPG), conducted by Abt Associates, indicated that HIV service and prevention program providers wanted to know more about STDs and how to link with STD prevention services, with particular interest in partner notification services and how they might participate in the process of notifying partners.

Course development was overseen and managed by Christine Burke, the coordinator of education and policy development for the DSTDP. Lisa Gurland, RN, PsyD, of the Bureau of Communicable Disease Control, helped at each step in the process. Ms. Burke worked with division managers and several front line supervisors (people who oversee field case investigation services) to develop curricula.

The first course in the series is an Overview of Sexually Transmitted Diseases; a lecture course with generous time allotted for questions. The second course covered STD Prevention Services. This is a mix of lecture and skills building, with an introduction to client-centered counseling as practiced in the STD clinics. The third course is focused on skills building for counseling and for partner elicitation interviews.

Staff of the HIV/AIDS Bureau reviewed the curricula. The draft curricula were presented to staff of the Boston Public Health Commission (BPHC), who had requested such training for its managers and outreached workers. THE BPHC HIV/AIDS service managers then arranged with DSTDP to pilot the courses.

THE DSTDP gave a pilot version of all three courses to the HIV/AIDS service managers of the BPHC. Evaluations were favorable. Each of the courses were then provided to the outreach workers under contract with the BPHC. A more in-depth debriefing with all parties will be scheduled to review evaluations and see what modifications need to be made to ensure that the education requested is being provided. The curricula and the associated teaching materials will then be produced in quantity and the entire DSTDP staff will be trained. That way, we can diversify the faculty for these courses and be better able to offer them across the state. The courses will be advertised through MPPG meetings and quarterly HIV/AIDS contract manager's meetings. An evaluation will be conducted at each training. Every evaluation will also include input about what additional information providers need, so that we can continually meet needs.

Vaccine Storage continued from page one ....

storing refrigerated vaccines innappropriatley at freezing temperatures. For most vaccines requiring refrigeration, freezing destroys the antigen. When vaccine is damaged due to exposure to freezing temperatures, the vaccine efficacy may have been affected. Therefore, sites that have had vaccine storage problems receive letters recommending that all individuals immunized with damaged vaccine be evaluated and revaccinated, if indicated.

In addition to vaccines, other biologicals have storage temperature ranges indicated on their package inserts. If you keep these items in the refrigerator, an out-of-range temperature may affect efficacy. Please take the time to review vaccine storage and handling procedures with staff. MIP staff can visit your site to review these procedures. If you are interested in technical assistance, or if you have questions regarding vaccine storage and handling, please contact the MIP's Vaccine Management Unit at (617) 983-6828.

Please take the time to ensure the following in your office:

- Each vaccine storage refrigerator should have a calibrated product temperature thermometer.
- The storage temperature range for refrigerated vaccines (all currently distributed vaccines except varicella) ***must be 35°F to 46°F (2°C to 8°C).***
- The temperature log must be checked at the beginning and end of each day.
- Check temperature logs for prior months for temperatures that are out of range.
- If temperatures are ever out of range (too low or too high), call the MIP's Vaccine Management Unit at (617) 983-6828.

Immunization

Please Remember Disease Reporting!!! Massachusetts Immunization Program (MIP) Reminds Providers to Report: Varicella (Chickenpox)

- Currently, providers are required to report the total number of cases of varicella seen in their practice by telephone or reporting card. The widespread use of varicella vaccine is having a dramatic impact on varicella incidence and it is becoming increasingly important to monitor any changes in the epidemiology of this disease. The MIP would like to remind providers to continue to report aggregate numbers of all cases of varicella, either seen in your office or diagnosed by telephone, to your local board of health.

- Beginning in 2001, the MIP will be asking you to report aggregate numbers of cases of varicella by age group, on a monthly basis. We are developing a special reporting form, with age group tables, for this purpose. At some time in the future, when the numbers of cases are more manageable, individual case investigation will be instituted.

- Please notify your local board of health and the MIP (617-983-6800) immediately about any unusual or high-risk case(s), outbreaks, or settings, so that we can assist with control measures. Examples include: 1) case(s) with unusual presentations or severe complications (including invasive group A streptococcal infection, pneumonia, hospitalization, death), 2) immunocompromised case(s), 3) outbreaks involving adolescents and adults, 4) outbreaks among vaccinated populations (these may point to improper storage and handling of vaccine), 5) large outbreaks, 6) outbreaks in healthcare settings, 7) outbreaks in child care centers with infants, or 8) outbreaks in other high-risk institutional settings.

Save the dates

The Eighth Annual Ounce of Prevention Conference

"Celebrating Strengths, Challenging Disparities: Reweaving the Healthy Community" - March 14 and 15, 2001, Royal Plaza Conference Center, Marlboro, MA. For more information, contact Michael Coughlin, MDPH - (617) 624-5275.

CDC/NIP Satellite Presentations: Proposed 2001 Dates

Epidemiology and Prevention of Vaccine Preventable Diseases: March 15, 22, 29 and April 5 - 11:30 AM to 4:30 PM each date. State Lab Institute, Jamaica Plain, MA.
Annual Immunization Update: September 20 - 8:00 AM to 4:00 PM. State Lab Institute, Jamaica Plain, MA.
International Travel Vaccines: December 6. State Lab Institute, Jamaica Plain, MA.
For more information on any of the satellite courses, please contact Walt LaSota at (617) 983-6834.

Update On Thimerosal in MIP Supplied Vaccines

On June 22, 2000 the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), the Advisory Committee on Immunization Practices (ACIP), and the United States Public Health Service (PHS) released a Joint Statement that reviewed the significant progress being made in removing thimerosal from childhood vaccines and the results of studies of a potential relationship between exposure to mercury in vaccines containing thimerosal and health effects. (http://www.cdc.gov/nip/vacsafe/concerns/thimerosal/joint_statement_00.htm)

As outlined in the Joint Statement, research into the potential health effects of thimerosal in vaccines is on going. The ACIP convened expert panels to review the data on 17 health outcomes in areas of renal function and neurological development. They have been unable to find any convincing evidence of harm caused by the low levels of thimerosal in vaccines. Therefore the Joint Statement reaffirms that use of any Hib or DTaP vaccine should continue according to the currently recommended schedule. Please note that current ACIP guidance also recommends that DTaP vaccine series be completed preferably with the same formulation.

The status of the Massachusetts Immunization Program's (MIP) vaccine supply is consistent with the nationwide progress on thimerosal reduction as outlined in the Joint Statement.

- All Hib and hepatitis B vaccines currently distributed by the MIP for pediatric immunization are thimerosal-free.

- The overall reduction in exposure to ethylmercury from the routine infant immunization schedule in the first year of life is 60% from 187.5 mcg to 75 mcg.

- The DTaP formulation that the MIP has consistently been distributing since 1996 is anticipated to be thimerosal-free during the first quarter of 2001 and was recently licensed for use for all 5 doses in the DTaP series. Based on current recommendations from the joint Committee on Vaccine Purchasing Strategies of the Massachusetts Chapter of the American Academy of Pediatrics (MCAAP) and the Massachusetts Immunization Action Partnership (MIAP), the MIP will be maintaining the distribution of the current DTaP formulation, Aventis Pasteur's Tripedia™, until at least the first quarter of 2001.

You be the epi

The director of health services at a college campus calls you to report a case of meningococcal meningitis in a student. *Neisseria meningitidis* was cultured from the student's cerebrospinal fluid. The student is a freshman female who resides on-campus in a shared dormitory room. How should you proceed?

Neisseria meningitidis is a bacterium carried in the nose and throats of 5 to 20% of the general population and a very small percentage of those exposed to carriers may develop an invasive infection, such as meningitis. Since *N. meningitidis* is spread through nasal/oral secretions, and close contacts of an invasive case are known to be at an increased risk for invasive infection, identification and chemoprophylaxis of a case's close contacts are necessary. Close contacts include household contacts (e.g., the case's roommate) and any other persons who shared saliva/respiratory secretions with the case through sharing food, beverages, cigarettes or close proximity to coughing/sneezing for extended periods of time, during the two weeks prior to the case's onset of illness. When evaluating the case's close contacts, one should consider participation in activities such as team sports, other extracurricular activities or parties. If the case is not able to provide information regarding his/her activities, enlist the assistance of the case's friends/roommate(s) to recount the case's activities in the two weeks prior to onset of illness. All close contacts of the case should be referred to healthcare providers or student health services for chemoprophylaxis. If a case contact has a history of vaccination with meningococcal vaccine, chemoprophylaxis is still necessary since the vaccine is not effective against all serogroups of the bacteria and will not eliminate the contact from being a carrier and spreading the bacteria to others who are not protected by vaccine. All students should also be made aware of the signs and symptoms suggestive of meningococcal meningitis and encouraged to seek medical attention if they become symptomatic. Surveillance for additional cases of invasive meningococcal disease should continue for three weeks after the initial case.

Recent studies have shown that college students (specifically, college freshman living in a dormitory setting) may have an increased risk of invasive infection with *N. meningitidis*. College freshmen who want to reduce their risk of meningococcal disease may choose to be vaccinated with meningococcal vaccine. All college students and their parents should talk to their healthcare providers and/or student health services about meningococcal disease, the vaccine and the specific circumstances of the students.

Summary of invasive meningococcal disease case follow-up:
1. Confirm the diagnosis: Culture confirmation of *N. meningitidis* from CSF.
2. Identify close contacts for prophylaxis: Evaluate the following persons/activities to identify close contacts (i.e., identify those persons who shared saliva with the case through sharing food, beverages, cigarettes etc.)
   - Roommate(s) (possibly dormates depending on the structure and environment of the dormitory)
   - Sexual Partner(s)
   - Close friend(s)
   - Sports team(s)
   - Extracurricular activities (clubs)
   - Parties
   - Workplace
3. Notify close contacts and refer them to their healthcare providers or student health services for chemoprophylaxis. On occasion, a general announcement may have to be posted to identify those at risk. For example, if the case attended a large party with many persons sharing food and beverages the day before her onset of illness, a general campus-wide announcement may be necessary. The announcement should identify the party date, time and place and refer those who attended and who may have shared food and/or beverages to their healthcare providers or student health services for chemoprophylaxis.
4. Provide general information on the signs and symptoms of meningitis to all students and continue surveillance for additional cases for 3 weeks.
5. Provide information on meningococcal vaccine to all students.

Tularemia continued from page 2 ...

making them aware of the situation and how they could best protect themselves.

On September 6th, CDC EIS officers returned to Martha's Vineyard where they again interviewed cases and physicians and collected a variety of environmental samples. A case-control study was initiated to determine what exposures were associated with tularemia infection. By the end of September, all confirmed cases and 100 randomly selected controls had been surveyed about outdoor activities and potential exposures. Data collected from these surveys are currently being analyzed.

As of October 20th, fifteen confirmed cases of tularemia among full-time or part-time Martha's Vineyard residents have been reported to MDPH. The majority of these cases have been in men (86%) over the age of forty (64%). Eight of fourteen (57%) confirmed cases are involved in outdoor occupations.

Refugee and Immigrant Health

Understanding and Addressing Disparities in Health Status in Newcomer Communities

Racial and ethnic disparities in health status are complex in terms of cause, as are community, health system, and public response to address the. REACH 2010, a 5-year demonstration project, is part of the President's Race Initiative and Goal for 2010 to eliminate disparities in health status experienced by racial and ethnic minorities in six priority areas: infant mortality, deficits in breast and cervical cancer screening and management, cardiovascular diseases, diabetes, HIV/AIDS, and child and/or adult immunizations. REACH 2010 projects are collaborative in nature and designed to foster community mobilization in geographically defined minority populations.

Four of the 32 projects funded for Phase I are in Massachusetts. The lead agencies and focus areas are: Boston Public Health Commission (breast and cervical cancer among women of African descent), Center for Community Health Education and Research, CCHER, (HIV/AIDS among Haitians in Greater Boston), Greater Lawrence Family Health Center (diabetes and associated cardiovascular disease among Latinos), and Lowell Community Health Center (cardiovascular disease and diabetes among Cambodians). Year one activities have focused on building coalitions, collecting and analyzing local data, and developing community action plans that will guide the work during the four-year Phase II. While two of the Massachusetts projects are particularly focused on refugee and immigrant communities, each of the four embraces and involves newcomers.

A common theme in the Massachusetts projects has revolved around data – the limitations of current data and the need to collect local, community-specific data. Information was collected from existing data sources (such as surveillance, vital statistics, and hospital discharges), as well as clinic records, focus groups, key informant interviews, provider surveys, and community surveys. Among the findings are: whether from Haiti, Cambodia, the Dominican Republic or Somalia, individuals at risk for poor health status often have health beliefs relative to causation and healing that differ from the biomedical model, have limited access to health information, have limited knowledge of the health system, and have limited experience with preventive care. Fear and stigma were reasons one may not be in care. The health systems, themselves, were identified as presenting numerous barriers to care, including poor language accessibility, poor cultural accessibility, lack of diversity, low levels of insurance coverage, poor transportation and, perhaps most profound, histories of institutional racism and low levels of community trust.

The coalitions' community action plans are multi-faceted in addressing disparities. Each is grounded in the community and, as such, builds on the strengths of the community, is culturally and linguistically appropriate, and takes a holistic approach to the person and the community. CCHER will utilize a variety of approaches to target Haitian men, women and youth as well as potential agents of change within the community, such as faith-based leaders, media and other formal and informal leaders. Haitian agencies will play a critical role in the delivery of activities. In Lowell, partner agencies will work to increase language and cultural accessibility to the health system, increase community awareness and utilization of health and emergency services, and provide health screenings, as well as individual and group support to Cambodians with cardiovascular disease. The Lawrence plan aims to stimulate a new sense of individual and community empowerment to decrease risk factors, improve health care, and improve health outcomes through use of multiple mechanisms such as coalitions, intergenerational exercise programs for Latina women, peer groups, churches, and children's education. Mini-grant programs will promote grass-roots involvement.

In early October, the Centers for Disease Control and Prevention announced the Phase II awards. The four Massachusetts projects were approved and funded and will now begin implementing their community action plans.

Building Healthy Communities Together Conference

Building Healthy Communities Together, a conference jointly sponsored by the Massachusetts Office for Refugees and Immigrants (ORI), Massachusetts Department of Public Health (DPH), and Massachusetts Public Health Association (MPHA), was held on October 4, 2000. The purpose of the conference was to provide an opportunity to enhance understanding of public health issues and to inform organizations and agencies providing services to refugee and immigrant communities about public health programs and initiatives. Approximately 130 persons attended with over half from community organizations, including refugee-organized and directed mutual assistance associations, community-based organization serving newcomers, refugee resettlement agencies, and community health centers.

Hortensia Amaro, Ph.D., Professor of Social and Behavioral Sciences, Boston University School of Public Health, was the keynote speaker. In addition to presenting background data on newcomers, she challenged participants to develop recommendations in several areas: data, language access, health insurance coverage, provider expertise, public perceptions about newcomers, and certification for foreign-trained professionals.

Six panelists described public health programs focused on tobacco, communicable diseases, domestic violence, and environmental health and their relevance for refugees and immigrants.

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Metro West Regional Clinical Services Highlight

Tuberculosis Surveillance Area (TSA) 2

TSA Nurse: Jo-Ann Keegan, R.N., M.S.N.

In 1999, 47 TB cases of tuberculosis were verified in the MetroWest region. The TB Division funds 3 TB clinics in the MetroWest region. This issue's highlighted clinic, managed by the Cambridge Health Alliance, is located at Cambridge Hospital. All residents in Cambridge and Somerville can receive TB-related services at the clinic. There were 13 verified TB cases in these two cities in 1999. Drs. Edward Nardell and David Bor head a team of pulmonary and ID specialists who see the clinic patients. Cambridge Health Department nurses, experienced in TB control, also staff the clinic. The clinic is accessible to the diverse, at-risk population it serves and the TB clinic team speaks a variety of languages including Haitian Creole, Portuguese and Spanish. Recently, the clinic moved into its newly renovated space in the Outpatient Clinical Specialties area on the third floor of the hospital. The new clinic hours are Mondays 2:00pm to 6:00pm and Thursdays 8:00am to 11:00am.

TB Community-Based Prevention Project: The Division of TB Prevention and Control initiated a community-based TB prevention project in Cambridge. The project focuses on increasing targeted testing and prevention of tuberculosis in the Haitian community. A multi-media public service program is being developed, in collaboration with the Cambridge Health Alliance, to increase awareness and the need for testing people at risk. The TB Division looks forward to continuing its partnership with the leaders in the Haitian community and the Cambridge Health Alliance.

Metro West Regional Clinical Services Address Change!
The TB clinic formerly located at St. Elizabeth's Medical Center has been relocated to the Brighton Marine Health Center at 77 Warren Street. The clinic serves all patients needing TB-related services that reside in the Allston-Brighton, Newton, Brookline and Watertown areas. The clinic is held every Monday from 12 noon to 4 PM. Call 617-562-5385 for appointments.

Employee changes

- Shameer Poonja is the Director of TB Prevention Services, which includes the Community-Based TB Prevention Project.
- Joe Pike is the epidemiologist on the TB Prevention Team. He has worked on several TB research projects for the Division.
- Kelly Letendre is the administrative assistant in the Southeast Regional TB office.
- Robert Suruki, is now working with Susan Logan on the Contact Investigation Project. He was the epidemiologist for the RFLP/Cluster Project.
- Shereese Davis is Biometrician for the surveillance and epidemiology unit.
- Joe DeCinti has been promoted to Director of Operations.
- Linda Singleton has been promoted to Assistant Division Director.

Save the date

The next Regional TB Update will be at the Lahey Clinic in Burlington on Thursday, January 25, 2001.

Announcement

New recommendations entitled, "Tuberculosis and Managed Care: A Guide for Massachusetts Providers" have been prepared by the Medical Advisory Committee for the Elimination of Tuberculosis. These recommendations are based on the new guidelines for targeted testing and treatment for latent TB infection published this year by the Centers for Disease Control and Prevention (CDC) and the American Thoracic Society (ATS) in *The American Journal of Respiratory and Critical Care Medicine 161:S221-247*. These new recommendations and guidelines will be mailed to Massachusetts providers in early 2001.

The following patient and community education brochures are now available:

- "Someone I Know has TB" developed for patients who are **contacts** to active TB cases.
- "Your TB Test" developed for patients that receive tuberculin skin tests - The brochure is also available in Chinese, French and Spanish.

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Building Healthy Communities Together *continued from page 6*

Janet L. Scott-Harris, director of minority health for the federal Department of Health and Human Services Region I, summarized three recurring themes from the panel: lack of data specific to newcomer populations and limitations of existing data, the lack of cultural specificity and competency in programs, and language barriers to information and services.

Afternoon breakout sessions offered opportunity for further exploration of the morning health topics – tobacco, communicable diseases, domestic violence, and environmental health. Representatives from newcomer community agencies opened the sessions, presenting overviews of their programs, discussing community beliefs, issues, successes and challenges. Successes were attributed to strong community collaborations, messages tailored to specific age groups and using various ethnic media, and working through the home and the family. Among the continuing challenges that were noted in all sessions were inadequate funding, addressing beliefs from home countries, changes in family dynamics upon arriving to the U.S., lack of health education materials, and the heightened challenge of working with persons without U.S. citizenship given the increasingly restrictive federal laws.

The conference successfully set the stage for future collaborations and information exchange.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 9, No.1 Spring 2001

Local Communities Prepare for Infectious Disease Emergencies

It's a sunny, breezy fall day in Capital City. The big game and homecoming are among the highlights of the coming weekend. Unfortunately, the hospital emergency department and ambulatory care facilities are doing a brisk business. A surprising number of folks are experiencing fever and respiratory distress. Looks like the flu season may be arriving early this year. Or is it?

During October 2000, the Division of Epidemiology and Immunization, in conjunction with Management Sciences for Health, sponsored day-long planning workshops entitled "Infectious Disease Emergency Preparedness." The goal of the interactive program was to stimulate awareness and community planning with regard to infectious disease emergencies including bioterrorism. The audience included local boards of health, first responders, emergency management staff, and hospital infectiouncontrol and emergency department practitioners. Workshops were held in Hyannis, Fairhaven, Brookline, Northampton, Worcester and North Andover. Seventy-six (76) communities were represented.

Following overviews of infectious disease epidemiology, bioterrorism, and the role of the Massachusetts Department of Fire Services, HazMat (Hazardous Materials) Response Program, participants analyzed case studies—a pandemic influenza scenario, and an anthrax release at a large public event. As the cases unfolded, each group considered various professional responsibilities and possible response strategies. Participants were prompted with questions and problems to highlight the strengths and needs of communities.

Based on the feedback provided by participants, the questions posed to speakers, and the conversations which filled the conference rooms during the case studies, these workshops were very well received. Sixty percent (60%) of those completing evaluations (235/245) rated the overall experience as "excellent." Twenty-seven percent (27%) rated the overall experience as "satisfactory." Participants left the workshop with a better understanding of what an infectious disease emergency is, and how various professional groups can coordinate response.

For more information about Infectious Disease Emergency Preparedness, including Bioterrorism Response, please contact the Division of Epidemiology and Immunization at 617-983-6800 or visit the MDPH website at www.state.ma.us/cdc. Additional resources are listed below:

Massachusetts Emergency Management Agency (MEMA) 400 Worcester Road, Framingham MA 01702-5399; Phone: (508)820-2000; Fax: (508) 820-2030; www.magnet.state.ma.us/mema/

MA Dept of Fire Services/Hazmat PO Box 1025, State Road, Stow, MA 01775; Phone: (978) 567-3100; Fax: (978) 567-3150; http://www.state.ma.us/dfs/sfmo/sfmohome.htm

U.S. Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333; Phone: (800) 311-3435; http://www.cdc.gov/

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Begin planning now for the 2001-2002 flu season!

The recommendation to offer flu vaccine to everyone 50 years of age and older will be implemented next fall and will likely result in increased demand. As in previous years, state-supplied vaccine will not be sufficient to meet the demand for flu vaccine. Health care providers should begin planning now. Submit orders for privately-purchased flu vaccine as soon as possible. For more information on purchasing vaccine, contact the MIP Vaccine Unit at (617) 983-6828.

Epidemiology

Recommendations for Petting Zoos, Petting Farms, Animal Fairs, and Other Events where Contact between Animals and the Public is Permitted

Several recent outbreaks of enteric illness associated with farm animals in the United States have highlighted the importance of safety whenever contact between animals and the public is permitted. The Massachusetts Department of Public Health (MDPH) recently released "Recommendations for Petting Zoos, Petting Farms, Animal Fairs, and Other Events where Contact between Animals and the Public is Permitted." The purpose of these recommendations is to decrease human exposures to rabies and to other illnesses transmitted from animals to people.

Diseases that can be transmitted from animals to people are called zoonotic diseases. Zoonotic diseases include enteric, or diarrheal illnesses caused by organisms such as *E. coli* 0157:H7, salmonella and cryptosporidium. Rabies, cat-scratch disease and psittacosis are other examples of zoonotic diseases. Certain groups of people may be more susceptible to these illnesses. These groups include infants, children, pregnant women and those individuals with a weakened immune systems.

One of the most important measures to prevent the transmission of zoonotic diseases to people is providing adequate hand washing facilities anywhere contact between animals and the public is permitted. Additionally, eating and drinking by the public in animal areas should not be allowed, and visitors to animal events or farms should NEVER be allowed to sample animal feed or drink raw milk. Animals should be closely monitored for signs of illness, and human contact with animals should always be supervised.

To obtain a complete copy of these new recommendations, go to the MDPH web site at www.state.ma.us/dph/; or call the Division of Epidemiology and Immunization at (617) 983-6800 to have a copy mailed to you.

West Nile Virus Update 2001

In December of last year, the State Laboratory Institute hosted the first meeting of the 2001 Massachusetts West Nile Virus Planning Conference. The conference was attended by a wide range of federal, state and local health officials, scientific experts, veterinary experts, mosquito control officials, and environmental groups. Four working groups were established to address the following topics: Surveillance and Disease Risk Assessment; Pesticide Risk Assessment; Intervention Efficacy; and Communication. These working groups have been meeting on a regular basis and will submit recommendations to be combined into a 2001 Arborvirus Control Plan for Massachusetts. This plan is scheduled for public release in April 2001.

West Nile Virus encephalitis is a rare disease. The virus is transmitted to humans when a mosquito feeds on an infected bird and then bites a human. There are several steps you can take to minimize the risk to you and your family. These primarily include reducing exposure to mosquitoes by avoiding outdoor activities between dusk and dawn, wearing long-sleeves and long pants when you must be outdoors during these hours, and the safe use of insect repellents according to the manufacturer,s directions.

In addition, you can reduce the number of mosquitoes around your home and neighborhood by eliminating any standing water that may have collected in ceramic pots, empty trash cans, discarded tires, wading pools and wheelbarrows. Keeping swimming pools properly chlorinated and not allowing water to stagnate in bird baths by changing it frequently can also help.

More detailed information is available on West Nile virus and more complete prevention tips, on the MDPH web site at www.state.ma.us/dph/. Once it has been made public, the 2001 Arborvirus Control Plan for Massachusetts will also be available on the web site.

Guide to Surveillance and Reporting

The Massachusetts Department of Public Health (MDPH) is pleased to announce the new "Guide to Surveillance and Reporting". Its purpose is to guide local boards of health and health department staff through specific surveillance and reporting responsibilities. The manual contains disease information, reporting guidelines, control recommendations and legal requirements. Local boards of health play a key role in the state's surveillance system and MDPH is commited to providing more technical assistance.

The manual is designed for use by local boards of health and health department staff who are responsible for infectious disease case investigation and follow-up (including VNAs that contract with local boards of health). Other healthcare professionals may wish to use this information to facilitate their understanding of local health department surveillance and reporting responsibilities and of how they can collaborate and strengthen timely and complete infectious disease reporting.

Two copies have been sent to each local board of health in Massachusetts (March 2001). Copies have also been sent to VNAs and hospital infection control departments. Local boards of health may request an additional copy (if two copies are not sufficient) by contacting the Division of Epidemiology and Immunization at (617) 983-6800.

Update on Syphilis In Massachusetts, 2000

After a decade of steady decline in reported syphilis in Massachusetts (from 1,175 cases in 1990 to an historic 81-year-low of 97 cases in 1999), there was an increase in the number of reported cases to 139 in 2000. An issue of particular concern was that this was the second year in a row of cases occurring among men who have sex with men (MSM). In 1980, more than 50% of the reported primary and secondary syphilis in Massachusetts was among MSM. Prevention efforts directed at HIV/AIDS had a dramatic effect and by the mid-1990s less than 1% of reported early syphilis cases in Massachusetts were among MSM. The decline of syphilis was a measure of the impact of safer sex messages. However, in 1999, included among the low number of reported cases were six cases in MSM. Three were associated with a bath house in Boston. The others involved use of the Internet to find sex partners. In 2000 34 MSM were among 139 total reported individuals with syphilis. Case and partner interviews indicate a number of factors in acquisition of disease, so interventions need to be multi-factorial. However, this is still a relatively small number of cases and the community is mobilizing to increase awareness and promote the safer sex message .

One of the critical elements of the Syphilis Elimination Plan is the engagement of affected communities in shaping the plan. A series of community forums is planned for April (National STD Month) across the state. The Syphilis Elimination Plan forums will be held in:
4/10 – Lowell/Lawrence, Middlesex Community College
4/11 – Jamaica Plain, Boston, State Laboratory Institute
4/18 – Springfield, Greek Cultural Center
4/19 – Revere, Williams School
4/23 – Brockton, Brockton High School
4/26 – Worcester, YWCA
The programs begin at 6 PM. For more information, contact the Syphilis Elimination Coordinator, Vanessa Jerry, at 617-983-6957.

New Data Management System for the STD Division

The STD Prevention Division has adopted the data management system created by the federal Center for Disease Control and Prevention (CDC). The existing FoxPro-based data management system was the oldest at the State Laboratory Institute, having been developed in 1985. This software was beginning to show its age more than its capabilities. CDC's system, called STD*MIS, will allow greater flexibility and can be customized without needing programmer support. The Division will be able to expand the number and type of variables it collects, such as behavioral and community-level information about cases, partners, and social circles. The new data management system is a step toward more sophisticated epidemiologic analysis and improved understanding of trends and correlates of infection. It is hoped that this will lead to more informed and effective interventions.

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jacqueline.dooley@state.ma.us

Chlamydia in Massachusetts, 2000

The STD Prevention Division and the STD Laboratory of the State Laboratory Institute have been working since 1996 to increase chlamydia screening among women who would not ordinarily have access to such services. It is part of a federally funded initiative called the Infertility Prevention Project, or IPP. The IPP has a third partner, the five Title X family planning agencies in Massachusetts. In addition to screening at STD clinics, we are now providing screening laboratory resources at 12 family planning clinics, two jails, one adolescent clinic, one homeless shelter, DYS facilities in two cities, and two HIV multi-service centers. In 1995, the STD Lab tested 3,197 specimens for chlamydia (screening and diagnostic). In 2000, the Lab tested 16,881specimens. Results, by type of site, were as follows:

Site	Total Tested	No. Males	No. Pos. (%)	No. Females	No. Pos. (%)
STD Clinics	4945	2181	285(13.1)	2749	203(7.4)
FP Clinics	6525	18	2(11.1)	6508	228(3.5)
Other Sites	4748	3197	173(4.4)	1561	80(5.1)
Total	16218	5396	460(8.5)	10818	511(4.7

The increase in reported cases of chlamydia is attributable in part to increased screening. In 2001, we will be approaching more jails and school-based clinics to offer these services. If, in the course of other screening activities, we notice that there are any sites with gonorrhea rates that rival the chlamydia rates, we have approval from CDC to use IPP funds for gonococcal screening.

Immunization

Update on Pertussis

Increasing incidence in adolescents and adults

In 2000, there were over 1280 confirmed cases of pertussis reported to the Massachusetts Department of Public Health (MDPH). This compares to approximately 650 cases in 1999. An increase is not unexpected as pertussis incidence typically cycles over 2-3 year periods. However, over the last decade there has been a marked trend in a shift of cases to older age groups. While the incidence in infants and children 1-10 years of age remained stable, in adolescents and adults it increased 5-10 fold. In 1998, adolescents and adults accounted for over 90% of pertussis cases in Massachusetts. In addition, the disease is often severe in these age groups with over 85% reporting paroxysmal cough, over 50% with cough for > 4 weeks, and over 40% experiencing vomiting after cough. (Yih, K et al: Journal of Indfectious Diseases 2000; 182: 1410-16)

Precautions when treating/prophylaxing newborns

An association between orally administered erythromycin and infantile hypertrophic pyloric stenosis (IHPS-blockage of the outlet of the stomach) has been reported in infants < 6 weeks of age. Since confirmation of erythromycin as a contributor to cases of IHPS will require additional investigation, and since alternative therapies are not as well studied, erythromycin is still recommended for the prophylaxis and treatment of disease caused by *Bordetella. pertussis.* The Massachusetts Immunization Program (MIP) recommends the following when administration of erythromycin to young infants is being considered:

- An infant's exposure to pertussis should be well established in order to minimize unnecessary prophylaxis.
- Physicians who prescribe erythromycin to newborns should inform parents about the potential risk and signs of IHPS, such as projectile vomiting or excessive irritability.
- Suspicion of IHPS following use of oral erythromycin should be reported to MedWatch at 800-FDA-1088 (tel.) or 800-FDA-0178 (fax) and to the MIP at (617) 983-6800.

New Guidance on the use of azithromycin and clarithromycin

For patients unable to tolerate erythromycin, the American Academy of Pediatrics' 2000 Redbook offers the following guidance on the use of azithromycin or clarithromycin for both the treatment and prophylaxis of pertussis

Clarithromycin (Biaxin®)
    Children: 15–20 mg/kg/day PO divided into 2 doses/day for 7 days (maximum: 1 gm/day)
    Adults: 500 mg PO 2 times/day for 7 days

Azithromycin (Zithromax®)
    Children: 10–12 mg/kg/day PO given as 1 dose/day for 5 days (maximum: 600 mg)
    Adults: 500 mg PO given as 1 dose/day for 5 days

Clarithromycin and azithromycin are NOT recommended for use in infants < 6 months of age or in pregnant women.

New control guidelines

The MIP has recently updated pertussis control guidelines to include the above information, as well as changes in recommendations regarding exclusion of asymptomatic contacts. If you would like a copy of these new guidelines or have questions, please call the MIP at (888) 658-2850 or (617) 983-6800.

Results of Birth Hospital Record Review

Perinatal hepatitis B infection is a disease with serious sequelae. Infants who are born to hepatitis B surface antigen (HBsAg)-positive mothers have a 90% chance of becoming chronic hepatitis B virus (HBV) carriers and 25% of these carriers will die early in life of cirrhosis or liver cancer. Timely and appropriate immunoprophylaxis can reduce an infant's chance of becoming a chronic HBV carrier by 90%.

Congenital rubella syndrome (CRS) is also a risk for infants born to rubella-susceptible women. Contracting rubella during early pregnancy can result in fetal death, premature delivery, and an array of congenital defects.

In an effort to reduce morbidity and mortality among infants born to HBsAg-positive and rubella-susceptible mothers, the Advisory Committee on Immunization Practices (ACIP) and the American College of Obstetricians and Gynecologists (ACOG) recommend that mothers be screened for HBsAg and rubella immunity at an early prenatal visit. Maternal HBsAg and rubella results should be documented in the mother's and infant's hospital record (MA Regulation 105 CMR 130.627). The ACIP also recommends that all infants, regardless of the mother's HBsAg status, receive their first dose of hepatitis B vaccine at birth, and that all rubella-susceptible women be immunized with a rubella-containing vaccine prior to discharge from a hospital after childbirth.

In 2000, the Massachusetts Immunization Program (MIP) conducted a statewide maternal and newborn birth hospital record review of infants born from January - June 1999. The MIP found that 100% of women were screened for HBsAg and 98% were screened for rubella immunity. Additionally, 91% of newborns had documentation of having received their first dose of hepatitis B vaccine at birth. Unfortunately, none of the 7 rubella-susceptible or rubella status-unknown women had documentation of having received a rubella-containing vaccine prior to hospital discharge.

The results of the birth hospital survey were encouraging, and birth hospitals and pediatric providers are encouraged to continue their collaboration with MIP to further reduce incidence of perinatal hepatitis B infection and CRS.

Epi Jumble

Yelm eiDasse	Tickborne disease endemic in Massachusetts
clEsvRulnaiE	Monitor disease occurrence
HgdaalNswhn	Most important step in infection control
daCpnieM	Global Epidemic
mccpUnaOeolc	Disease targeted by newly licensed childhood vaccine
mtaaLuriE	Zoonotic disease implicated in recent Martha's Vineyard outbreak
yptMCaTmasoi	Absence of clinical symptoms
silalRet goOceSenYMotn	Pathogen responsible for numerous ready-to-eat meat product recalls

Use the above capitalized letters to solve this clue:

A complication of *E. coli* O157:H7 is:

○○○○○○○○○

○○○○○○

○○○○○○○○

Save the dates

The Sixth Annual MIAP Skills Building Conference: May 17, 2001, 8:30 AM to 4:30 PM, Holiday Inn, Worcester. A one-day conference to provide up to date information on the fast changing field of immunization with a special emphasis on implications in Massachusetts. For more information call (617) 451-0049, ext. 806 or email: miapma@hotmail.com

2001 Satellite Broadcast Presentations: Sponsored by the National Immunization Program, Centers for Disease Control and Prevention.
Immunization Update-2001: September 20, SLI Auditorium, Jamaica Plain, MA, 9:00 AM to 11:30 AM and 12:00 PM to 2:30 PM.
Internation Travel (Vaccinations): December 6, SLI Auditorium, Jamaica Plain, MA, 12:00 PM to 3:30 PM.
For more information on the satellite courses, contact Walt LaSota at (617) 983-6834.

You be the epi

A thirty year-old white male was seen at an STD clinic early in the year. He came to the clinic upon being informed by a casual sex partner that he (the partner) had been diagnosed with gonorrhea (GC). The patient presented with a macular rash on his abdomen. A urethral swab was done to test for gonorrhea and for chlamydia, and he was treated presumptively for GC and chlamydia. A blood specimen was drawn for syphilis serology. The syphilis serology result was positive, with a titer of 1:128. The man was diagnosed with secondary syphilis.

The patient reported that he and his primary partner had sex with people they met through Internet chat rooms. He had anonymous sex with people from Philadelphia and San Francisco whom he had met through the Internet. However, he named five workable contacts, with addresses and phone numbers provided.

The first was a 30 year-old white male who was diagnosed with gonorrhea but did not have syphilis. He was treated for the GC and "epi-treated" for the syphilis. The second was a 33 year-old white male who had neither GC nor syphilis. He was also "epi-treated" for syphilis. The third was a 29 year-old Hispanic male, who was diagnosed with secondary syphilis and did not have GC. He was treated for syphilis. The fourth was a 36 year-old white male did not have GC or syphilis. He was "epi-treated" for syphilis. The fifth partner was a 40 year-old white male. He refused medical examination and treatment.

These six men were all professionals who traveled across the US and engaged in sexual relations with people they met through Internet chat rooms or at parties advertised on the Internet.

What do you do now?

This cluster is an illustration of scenarios that are becoming more common across the country. The Internet is being used to find sex partners or to find parties or events where one can engage in sex. The Internet is being used by people of all ages, race/ethnicity groups and sexual orientation as a way of making social and sexual connections. It is changing the traditional epidemiology of sexually transmitted diseases, in which partners were connected, more often than not, through social group and geography. The change in sexual partner mixing patterns makes it imperative to adjust surveillance and disease intervention. In addition to the usual questions involving who, what, when and where, we need to begin asking, "How did you meet your partner(s)?" We need to track what is on the World Wide Web. Which web sites are being used? Where and when will parties or other gatherings take place? How can protection messages be prominently displayed on the web and at such events? What information about STDs and STD prevention is on the web? Who is transmitting such information? Is it factual? STD prevention programs need to get on the "information super-highway" to be able to fashion appropriate prevention interventions for this medium.

Refugee and Immigrant Health

Improved Access to Health Care for Asylees

The Immigration and Naturalization Service defines an asylee as an individual "in the United States who is unable or unwilling to return to his or her country of nationality because of persecution or a well-founded fear of persecution." The basis for granting asylum in the United States is consistent with the 1967 United Nations Protocol on Refugees.

In recent years, approximately 20,000 asylum seekers received asylum in the United States annually. The leading countries of nationality for cases approved in FY2000 were China, Somalia, Ethiopia, Colombia and India.

Federal regulations limit time eligibility for refugee cash and medical assistance to eight months. Recent policy changes by the Office of Refugee Resettlement permit asylees to be eligible for refugee benefits and services, including health assessment, beginning on the date asylum is granted rather than the date of entry into the United States. Historically, while recipients of political asylum were technically eligible for these benefits, the process for receiving asylum was long and protracted and the vast majority of asylees were beyond the period of eligibility when asylum was granted.

As a result of the policy change, physicians performing refugee health assessments, as part of the Massachusetts Refugee Health Assessment Program (RHAP), may begin to see asylees referred for evaluation. In many ways, the health status of asylees will resemble that of refugees. Asylees, like refugees, come to the United States often after having experienced significant psychological and physical trauma, particularly individual torture and rape victimization. At the time of the health assessment, shortly after arrival, most refugees are not experiencing symptoms of acute psychological distress. In contrast, psychological issues among asylees may be central in the struggles of their daily lives and compounded by the societal marginalization of asylum applicants. During the process of applying for asylum, applicants are in a tenuous position, having no access to publicly funded benefits and a low likelihood of working in any meaningful job with benefits like health insurance.

While most asylees will not have undergone an overseas health evaluation, many will have had some kind of medical or psychological evaluation in support of their legal case. As in reviewing the OF-157 overseas health screening form, RHAP clinicians should ask the asylee if they have any documentation of the findings from these assessments, often done pro bono in private settings. In most cases, such evaluations are not going to include screening tests as are conducted during immigration examinations. Therefore, clinicians should remember that asylees will not have had a chest X-ray, VDRL test, or HIV test done overseas. RHAP protocols mandate a PPD test for evaluating tuberculosis infection while RPR and HIV tests are available as supplemental tests complementing the core testing package of a urinalysis, complete blood counts, stool microscopy for ova and parasites, varicella and hepatitis B serologies, and lead testing (for young children).

Like refugees, it is expected that asylees will have high prevalences of latent tuberculosis infection, dental caries, eosinophilia, anemia, chronic diseases such as diabetes and hypertension, and underimmunization. Many will also come from countries with endemic hepatitis B, parasitoses, and HIV infec-

continued on page 8

Resource Corner

The Provider's Guide to Quality and Culture
http://erc.msh.org/quality&culture

The Provider's Guide to Quality and Culture is a new web resource designed to improve awareness and understanding of cultural competence among primary health care providers. Developed by Management Sciences for Health in partnership with the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Primary Health Care, The Provider's Guide has as its focus an interactive quiz that allows health providers to determine their own level of cultural competence. A variety of learning resources are available, including information on specific cultural groups, tools for improving cross-cultural communication, bibliographies, and links to online databases and other relevant materials.

We wish to inform you that tomorrow we will be killed with our families
Philip Gourevitch. Farrar, Straus and Giroux; New York. 1998.

Philip Gourevitch has written a book that summons up memories of the 1994 Rwandan genocide and refugee crisis and details tragedies and moral dilemmas of such magnitude that we are left wondering how we never knew or remembered what happened in this humanitarian catastrophe.

Through a collection of personal interviews, Gourevitch brings the reader to see events through multiple perspectives and to begin to understand the post-colonial and political context. Rwanda, in the aftermath, faced the return of many Hutus, all of whom had earlier been instructed by their Hutu Power leaders to kill all Tutsis; Tutsi community members who survived the genocide now struggle with enormous loss and coexistence with returning Hutus. Gourevitch analyzes the challenges of reconciliation, retribution and regional instability.

The U.S. is resettling an increasing number of refugees from Africa. Among the arrivals from Rwanda and surrounding countries are individuals who have been affected by this genocide and its aftermath. Though we may not know their personal histories, this book helps anyone working with newcomers from this region to capture a glimpse of what they, their communities and nations may have endured.

Detecting Laboratory Cross-Contaminated Tuberculosis Cultures: Results of an 18 month study

Cross-contamination of *M. tuberculosis* (MTB) specimens is reported to be responsible for misdiagnosis of tuberculosis disease (TB) in 1.8-3.5% of TB patients. Such misdiagnoses can result in unnecessary treatment and burden the health care system. Individual laboratories and programs have criteria for suspecting that laboratory contamination or other error has occurred. In 1998, the MDPH Division of TB Prevention & Control collaborated with the CDC on a study investigating MTB specimens to determine the rate and cost of misdiagnosis of TB in Massachusetts due to laboratory cross-contamination, and to evaluate standardized criteria for triggering suspicion that cross-contamination has occurred. Twenty-three laboratories processing MTB specimens from Massachusetts' residents were asked to participate.

METHODS:

From January 1, 1998 through June 30, 1999, 342 potential TB cases were enrolled in the study. The 5 criteria used to screen for cross-contamination included: 1) patients with a single MTB culture-positive specimen, excluding those with tissue pathology examination consistent with TB disease; 2) patients with an MTB culture-positive specimen collected >30 days after a negative culture; 3) patients with an MTB culture-positive specimen collected >90 days after the start of TB therapy, the isolate being a different strain from any others from the same patient; 4) patients for whom a healthcare provider suspected that an MTB culture-positive result was erroneous; and 5) patients for whom the laboratory processing the specimen suspected that an MTB culture-positive result was erroneous. Potential sources of contamination included MTB culture-positive specimens processed within two working days of the questionable specimen and positive control isolates used within the same biochemical safety cabinet.

Isolates were typed by RFLP analysis at the Wadsworth Center, New York State Department of Health. Intensive epidemiologic investigation of patients and sources was conducted. Three TB experts reviewed the data and voted whether the MTB cultures were likely true- or false-positives. In addition to identifying cross-contamination, the criteria identified other laboratory errors leading to false-positives, such as mislabeling of specimens and misinoculation. Cost analysis was performed for patients treated erroneously for TB.

RESULTS:

Of 342 patients screened, 5 (1.46%) had cross-contaminated cultures and 3 (.8%) had a misdiagnosis of TB. The total direct cost for treating these patients was estimated at $27,600, of which $26,810 was for public health clinical services and medications.

The sensitivity and specificity of the criteria in detecting false-positive cultures from cross-contamination and other laboratory error was 100% and 0%, respectively, for criterion 1, 62.5% and 97.2% for criterion 4, and 50% and 100% for criterion 5. No patients met criteria 2 or 3; thus we could not evaluate these criteria.

DISCUSSION:

In our experience, healthcare providers and TB laboratories were the best sources for identifying possible errors. TB Division efforts to increase communication with these groups will help in identifying erroneous culture results. Although highly sensitive, lack of specificity made criterion 1 inefficient for population-based screening. However, it may be the most sensitive tool for investigating laboratory error in instances where there is a high suspicion of error in an individual laboratory over time. The TB Division would like to thank the healthcare providers and laboratory personnel who participated in the study. We look forward to our continuing collaboration.

Western and Central Regional Clinical Services Highlight TB Surveillance Area (TSA) 1

TSA Nurse: Carol Cahill, R.N.
TSA Secretary: Evelyn Thomas
Tel: (413) 586-7525

Tuberculosis Surveillance Area 1 is largely rural, comprised of communities in Western and Central Massachusetts. The TB Division funds 7 TB Clinics in this region. This issue will highlight the Baystate TB Clinic.

Recently, the Baystate TB clinic moved to a new location at the Neighborhood Health Center, 11 Wilbraham Road in Springfield. This clinic has a team of pulmonologists headed by Dr. John N. Landis. The nurse manager is Areatha Lawson. Joanna Otero provides secretarial services. A team of health department nurses work with Areatha to coordinate tuberculosis services for their individual cities/towns. The clinic provides TB-related clinical services to residents living in twenty communities surrounding Springfield.

The clinic staff is available on Monday, Tuesday and Wednesday. Pulmonologists are at the clinic every Tuesday morning. Dr. Landis chairs a monthly chemotherapy conference with the staff to discuss the TB cases and their management. Once a month they hold a pediatric clinic, staffed by pediatric infectious disease specialists. Call (413) 794-5435 for an appointment.

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TB Program Announcements

Announcements

- New calipers to measure Tuberculin Skin Test (TST) results are now available.
- The following patient and community education resources are now available.
    - A poster entitled, "Be a Hero" developed to educate children and motivate them to adhere to tuberculosis treatment regimens.
    - "Hero" buttons and stickers for children who complete TB treatment regimens.

Save the date

- The next Regional TB Update for the Southeast Region will be held at the Massasoit Community College Conference Center, Room A, 770 Crescent Street in Brockton on May 17, 2001.
- The next Regional TB Update for the Northeast Region will be held at Lawrence General Hospital, Lawrence, on September 20, 2001.

Answers to the Epi Jumble on page 5
Lyme Disease, Surveillance, Handwashing, Pandemic, Pneumococcal, Tularemia, Asymptomatic, Listeria Monocytogenes, Hemolytic Uremic Syndrome

Health Care for Asylees, continued from page 6

tion. While some parasitoses are typically self-limited, others such as schistosomiasis and strongyloidiasis may present particular long-term health risks to the patient. Also, parasitic infections may persist within refugee communities if not properly identified and treated.

Linkage with primary care will be important for asylees, particularly given their societal marginalization and the fact that most will not have had a regular source of medical care. The primary care physician will be able to follow up on neglected health needs as well as those newly identified during the refugee health assessment.

COMMUNICABLE DISEASE UPDATE is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health, Howard K. Koh, Commissioner.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 9, No.2 Summer 2001

A Defining Time in the Global Tuberculosis Pandemic

Hippocrates said, "Healing is a matter of time and it is also, a matter of opportunity." This wisdom is still relevant in 2001. Today, the majority of people sick with tuberculosis (TB) in the world do not have access to adequate treatment. Currently, 71% of the TB cases in Massachusetts occur among people from high-prevalence countries. The progress toward the elimination of TB in Massachusetts will depend on how effectively TB is managed and controlled worldwide. Efforts are underway to improve access to treatment globally and develop more effective drugs to treat TB.

Many people in industrialized countries (where only 3% to 5% of the world's TB cases occur) believe TB is an ancient disease that is no longer a threat. TB, historically known as the "captain of death", the "great white plague" and "consumption", continues to be one of the deadliest diseases today. According to the World Health Organization, "someone in the world dies of TB every 10 seconds, and only one in five people sick with TB receive adequate treatment." TB is the leading cause of death among young women and people with HIV infection. More than 250,000 children die of TB every year. One third of the world population is at-risk with latent TB infection and one additional person is newly infected every second. Worldwide, cases of drug-resistant, often incurable TB, threaten the progress made in managing, controlling and reducing the incidence of TB.

In some areas of the world, there has been a four-fold increase in the incidence of TB and cure rates have declined from 90% to 50%. These developments are due, in part, to the lack of resources and coinfection with HIV and TB. The TB case rate in some African countries increased 20% from 1997 to 1999. Many countries do not have adequate drugs, laboratory supplies or well-trained health care workers. Shortages of drugs and disruption in therapy can lead to drug-resistant TB, which is difficult to treat, and requires longer and more expensive treatment. There has not been a major new treatment developed for TB in the past 30 years, compounding the problem.

The Global Alliance for TB Drug Development, consisting of 25 professional organizations, was formed to respond to the critical need for newer TB drugs that are accessible. The Global Alliance will function as a not-for-profit research and development partnership to accelerate the development of new, effective and inexpensive TB drugs. Members of the Alliance hope the new drugs will be readily available, will shorten the duration of treatment, and improve the treatment for latent TB infection and multi-drug resistant TB. Current treatment for nonresistant TB consists of a 6-month regimen. Additional resources are needed to monitor and provide long-term treatment. The Alliance hopes to produce new drugs to reduce treatment time by 50% and ensure that the "opportunity to heal" can be accessed by everyone.

Boston Hosts Cultural Orientation Trainers

Most refugees receive a brief cultural orientation training overseas prior to departing for the United States. The orientation may touch upon issues such as housing, employment, education, health, rights and responsibilities, and cultural adjustment. Trainers are challenged to present an accurate depiction of life in the U.S. when the details vary greatly between states and local communities and the orientation itself may be as short as four hours.

Boston was among the cities that recently hosted cultural orientation trainers as part of a program that is designed to increase understanding of the domestic side of resettlement. Trainers from Damascus, Syria and Istanbul, Turkey spent a half-day with the Refugee and Immigrant Health Program during their three days in Boston. The learning was bi-directional. The Massachusetts refugee health assessment and its role in resettlement were presented. A lengthy discussion on tuberculosis (TB) testing and treatment was particularly useful in pointing out the need for clear and consistent messages for refugees. Overseas, refugees are screened for active infectious TB. Those who are not placed on a

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Epidemiology

West Nile Virus Update

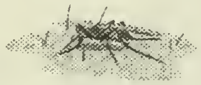
On April 24, 2001, the Massachusetts Department of Public Health (MDPH) released the 2001 West Nile Virus (WNV) Surveillance and Control Plan for Massachusetts to the public. This plan outlines recommendations for dead bird reporting, mosquito and human surveillance, communication of surveillance data, and the use of personal protection methods and pesticides.

While most dead birds will not be collected and tested for WNV, keeping track of their locations will play an important role in determining the level of human risk in a particular area. This year, local health officials and the public should report dead birds to the MDPH WNV Information Line at **1-866-MASS-WNV (1-866-627-7968)**. When a dead bird is needed for testing, MDPH staff will notify the caller and coordinate with local health officials to arrange for the safe collection and transport of the bird to the State Laboratory Institute (SLI) for WNV and eastern equine encephalitis virus (EEEV) testing.

Fixed mosquito trap sites will be located in communities that had evidence of significant WNV activity last year. In addition, mosquitoes collected from long-term fixed trap sites in the EEE high-risk areas of Southeastern and Eastern Massachusetts will be tested for EEEV and WNV. MDPH will also increase mosquito collection in areas that demonstrate high dead bird density.

MDPH will utilize an enhanced passive surveillance system for human cases of WNV by providing health-care providers with information on mosquito-borne diseases and regularly reminding them of the need to report suspect cases of encephalitis, meningoencephalitis and meningitis of potential viral etiology. Specimens from suspect cases will be tested for EEEV and WNV at SLI. In any area of Massachusetts that exhibits evidence of increased WNV activity, active surveillance will be initiated and conducted by telephone, alerting hospital infection control practitioners in the affected area. Health care providers should report suspect cases to the MDPH WNV Information Line at 1-866-MASS-WNV (1-866-627-7968).

MDPH will communicate surveillance data by posting daily results to the MDPH web site at <www.state.ma.us/dph/>. This site will contain WNV educational materials, the 2001 WNV Surveillance and Control Plan, detailed information on ways to limit exposure to mosquitoes and maps. Additionally, official press releases, local community information and information for providers will be available at this site. The MDPH WNV Information Line will also provide general WNV information, personal protection recommendations and information on pesticides, throughout the season.



Picnics, Barbecues, E. coli?

It's summertime, which means picnics, parties, and barbecues. For the Massachusetts Department of Public Health (MDPH), summertime also means an increase in *E. coli* O157:H7 cases. Since 1982, *E. coli* O157:H7 has been recognized as an important cause of bloody diarrhea. Outbreaks have been linked to contact with farm animals and consumption of undercooked ground beef, unpasteurized apple juice/cider and contaminated water. The young and old are usually more severely ill when infected with *E. coli* O157:H7, and infection in young children may lead to complications such as hemolytic uremic syndrome (HUS).

Steps to prevent *E. coli* O157:H7 infection include:

- Wash your hands thoroughly with soap and water before eating or preparing food, after using the toilet, and after changing diapers.
- Make sure that animal-derived food products do not contaminate foods served raw (such as vegetables).
- Wash fruits and vegetables thoroughly.
- Cook all ground beef and hamburgers thoroughly.
- Drink only pasteurized milk, juice, and cider.

For more information on reporting and investigating cases of *E. coli* O157:H7 and HUS, please refer to the MDPH's *Guide to Surveillance and Reporting*, now available online at <http://www.state.ma.us/dph/cdc/gsrman/Gsr.htm>.

Multi-drug Resistant *Salmonella* Newport Infection in Massachusetts

Over the past two years, sporadic illness due to Salmonella Newport infection has increased in Massachusetts. During this time, there has also been an increase in multi-drug resistant (MDR) Salmonella Newport infections. These MDR cases are not linked geographically and are dispersed over time; therefore, a point-source exposure is unlikely.

One important discovery in the investigation of this increase is that cattle appear to be a reservoir for human infection. Although other reservoirs may exist, clusters of the same strain of MDR S. Newport have been detected among dairy cattle in Massachusetts and Vermont. Although direct farm exposure was identified as a strong risk factor, this only explained a small portion of the reported human cases. A more likely explanation is that people are getting exposed through food sources such as undercooked beef and raw milk or raw milk products. MDR S. Newport has been isolated from ground beef in other states and a recent outbreak of this strain was caused by cheese made from unpasteurized milk. Pasteurization and proper cooking will kill this organism.

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Chlamydia Screening in County Jails in Massachusetts

The Division of STD Prevention received funding from the CDC to screen for chlamydia infections at county jails. Screening began in February 1999 at the Hampden County Correctional Center (HCCC) in Ludlow and in March 1999 at the Nashua Street Jail in Boston.

Initiating screening required evaluation of intake, testing and courier procedures. The STD Laboratory had to prepare for the increased testing volume. Included in the laboratory preparations was familiarization with the use of urine as the clinical specimen. The use of urine increased cooperation of inmates and decreased time to collect specimens.

The major issue for the jails was to ensure that every person would be seen within 24 hours of admission. Most intakes are performed between 3-11 PM. A nurse was scheduled to work the second shift at one of the jails to ensure that the majority of people would be seen at admission. This nurse had received STD training from the Region I STD/HIV Prevention Training Center. It was also important the courier delivered specimens to the laboratory early enough to ensure processing before the end of the workday. However, it was difficult for the courier to enter the jails and get to the Health Service Units. This problem was resolved when one jail agreed to place a small (1.5 cubic feet) refrigerator in the Administration Office, located outside the secured area of the jail. All specimens were brought to the refrigerator at least once each day. Pick-ups and deliveries became very easy to accomplish.

Summary of All Testing Done in Two Massachusetts Jails, 1999-2000

		Hampden County			*Suffolk County*		
Year	*Gender*	*Pos(%)*	*Neg*	*Total*	*Pos(%)*	*Neg*	*Total*
1999	Female	15(5.2)	276	291	25(3.5)	682	707
	Male	117(6.1)	1810	1927	1(10.0)	9	10
2000	Female	12(8.3)	259	271	43(4.3)	961	1004
	Male	113(5.2)	2055	2168	75(7.0)	998	1073

The majority of clients were asymptomatic. It is curious that the prevalence of infection among women was higher in western Massachusetts while the opposite was true among the men. We will continue testing until there are sufficient numbers to draw valid conclusions.

County jails are a good place to conduct STD screening. We shall continue to test at these two sites and seek the means to begin testing in other county jails.

STD/HIV Staff Trainings

The Division of STD Prevention is currently concluding a series of five trainings for staff of HIV/AIDS Bureau-funded community agencies who provide education and outreach services to clients and in the community.

The curriculum, a collaborative effort with the HIV/AIDS Bureau, was designed as a one-day intensive course. It covers psychosocial issues, epidemiology, transmission and treatment, and STD communication, counseling and referral skills.

Each of the six trainings focused on the needs of staff providing services to a particular group, including adolescents, women, men who have sex with men, injection drug users and Spanish speaking clients. The group for Spanish speaking staff and clients was conducted in Spanish.

Feedback from these trainings highlighted the value of both the content and the networking opportunities they offered. For more information about education programs offered by the Division of STD Prevention, call our main number at 983-6940 and ask to speak with the Director of Education.

Immunization

No Shortage of Td Vaccine in Massachusetts

There have been a number of recent reports about a temporary shortage of adult tetanus and diphtheria toxoids (Td) and tetanus toxoid (TT) in the United States because of decreased production of these vaccines. There is now only one remaining national private manufacturer of tetanus-toxoid containing products for adults, Aventis Pasteur.

- Please note that the University of Massachusetts Biologic Laboratories manufactures Td vaccine for use in this state. Therefore, there is no shortage of Td vaccine in Massachusetts and prioritization to higher risk individuals is not necessary in Massachusetts.
- Also please note that the Centers for Disease Control (CDC) and the Massachusetts Immunization Program (MIP) do not recommend the use of DTaP in place of Td. DTaP in the United States is currently only licensed for use in individuals < 7 years of age. Pediatric formulations of DTaP contain a greater concentration of diphtheria toxoid than is found in adult formulations of Td vaccine, and have the potential to result in more severe local reactions when used in adults.

If you are currently enrolled in the Massachusetts Immunization Program/Vaccines For Children Program, you may order free, state-supplied Td vaccine from your local vaccine distributor. If you aren't enrolled and would like to order Td vaccine, please call the MIP's Vaccine Management Unit at (617) 983-6828. If you have any questions regarding DTaP or Td vaccine, please call the MIP at (617) 983-6800 or toll free at (888) 658-2850.

Adult Immunization Awards

The following individuals and organizations were recognized at the 6th Annual Massachusetts Adult Immunization Conference on April 25, 2001 for their dedication and innovations in assuring access to immunizations for adults in Massachusetts:

Anne Marie Jette, RN, BSN, of Jewish Healthcare, Inc.
Massachusetts Association of Public Health Nurses
Anna Bissonnette, RN, of Boston Medical Center
Donna DiMartino, RN, MSN, of SPARC
Douglas Shenson, MD, MPH, of SPARC

Immunization Requirements for Preschool and "K0" programs in Public School Systems

The Massachusetts Immunization Program (MIP) has been receiving questions concerning clarification of the immunization requirements for entry into a preschool program or a "K0" program (105 CMR 220.500) offered by public school systems, which are not regulated by the Office of Child Care Services. While not all school systems have these programs, they are increasing in number. The following vaccines are required for entry into preschool or "K0" program, unless there is a medical exemption signed and dated by a physician, or a religious exemption signed by the parent/guardian.

Immunization Requirements for Preschool and "KO" Programs in Public School Systems

Vaccine	*No. of Doses Required*
DTaP	≥ 4
Polio	≥ 1
MMR	1
Hep B	3
Varicella	1 dose or a reliable history of disease. A reliable history of chickenpox is defined as: 1) physician interpretation of parent/guardian description of chickenpox; 2) physician diagnosis of chickenpox; or 3) serologic proof of immunity

School health programs should have in place protocols for reassessing immunization status for the DTaP, Polio, and MMR requirements when a child moves from a K0 or preschool program to K1. They should also have a system for tracking students with "temporary" medical exemptions to ensure they receive their final doses in the series for these vaccines.

Remember, for children in K1 or K2, regardless of age, the requirements are ≥ 5 doses of DTaP, ≥ 4 doses of polio vaccine, 2 doses of MMR, 3 doses of Hep B, and 1 dose of varicella or reliable history of disease.

Please feel free to call the MIP at (617) 983-6800, or toll free at (888) 658-2850, if you need further clarification or assistance.

You be the epi

Tetanus Prophylaxis in Wound Management

You are an emergency department (ED) doctor at a Massachusetts hospital. A 65-year old woman is brought into the ED. She has a bandage on her forearm that upon removal, reveals a deep laceration that still contains some soil. When asked about her wound, she reports that earlier in the day she received her injury while getting gardening tools out of the garage, lacerating her arm on a dirty shovel.

You ask if she has ever been vaccinated against tetanus. She mentions that her husband is a WWII veteran and had received tetanus vaccine in the past, but she has not. You remember a memo indicating that there is currently a shortage of tetanus diphtheria (Td) vaccine in the United States (but not in Massachusetts). What do you do? Is there a risk to others? What treatment and/or control measure should be implemented?

Background

Tetanus is a disease that is caused by a toxin produced by the bacterium, *Clostridium tetani,* a spore-forming organism that is ubiquitous in the environment. The disease has become rare in the United States, because of the widespread use of tetanus vaccine. Adults should make sure that they have had a primary series of ≥ 3 doses of tetanus-containing vaccine followed by a booster dose of Td vaccine every 10 years. Almost all reported cases of tetanus are in persons who have either never been vaccinated, or who completed a primary series, but have not had a booster in the preceding 10 years. Injuries such as puncture wounds, lacerations, and abrasions account for over half of the reported cases. However, only 40% of cases with these injuries sought medical attention and only about 40% of those received the appropriate treatment.

What do you do now?

There is no person-to-person transmission of tetanus, so there is no risk to contacts of people with tetanus –prone wounds or tetanus itself. You clean and flush the wound to remove any remaining soil. Since the case does not have documentation of immunization against tetanus and the wound was contaminated with soil, her immunoprophylaxis will include 250 U of Tetanus Immune Globulin (TIG) and 0.5 cc of Td vaccine. TIG confers temporary passive immunity, while the body's immune system responds to the Td toxoids.

The following table should be used to determine appropriate wound management.

Tetanus Prophylaxis in Wound Management				
	Clean, minor wounds		*All other wounds (1)*	
Vaccination History	Td (2)	TIG	Td (2)	TIG (3)
Unknown or < 3 doses	Yes	No	Yes	Yes
≥ 3 doses	No (4)	No	No (5)	No

[1] Such as, but not limited to, wounds contaminated with dirt, feces, soil, and saliva; puncture wounds; avulsions; and wounds resulting from missiles, crushing, burns, and frostbite.
[2] Use DTaP or DT for children < 7 years of age.
[3] TIG dose = 250 U
[4] Yes, if > 10 years since last dose.
[5] Yes, if > 5 years since last dose.
(Adapted from the American Academy of Pediatrics, *2000 Red Book*)

Since she has no documentation of having received a primary series, this first dose of Td vaccine can serve as the initiation of the immunization series. The next dose of Td vaccine is given ≥ 4 weeks after the first dose and the third dose ≥ 6-12 months after the second dose. This occasion should also be used as an opportunity to evaluate the Td status of any household members and initiate the primary series or give a booster dose of Td vaccine, if indicated.

As for the current shortage of Td vaccine in the United States, there is **no** shortage of Td vaccine in Massachusetts due to the supply that the University of Massachusetts Biologic Laboratories manufactures for use in the Commonwealth.

Information on the prevention of tetanus can be found in the American Academy of Pediatrics' *Red Book 2000: Report of the Committee on Infectious Diseases, 25th Edition* and also in MDPH's *Guide to Surveillance and Reporting*, and *Mandell, Douglas, and Bennett's Principles and Practices of Infectious Diseases* (Volume II, pages 2537-2543). If you have any questions on tetanus or appropriate treatment, please call the Massachusetts Immunization Program (MIP) at (617)983-6800 or toll free at (888)658-2850.

Refugee and Immigrant Health

Refugees in Western Massachusetts

The Western Massachusetts counties of Hampden, Hampshire, Berkshire, and Franklin were the destination for over 2,100 refugees during the four years 1997-2000. This represents nearly one-quarter of all resettlement in the Commonwealth. Although refugees came from 23 different countries, 87% were from the former Soviet Union and 9% from the former Yugoslavia, including Kosovo. Previous to 1997, most refugees resettled in this area were from Southeast Asia.

While refugees initially resettled in 28 cities and towns, nearly 65% resettled in Westfield or West Springfield and another 20% in Chicopee or Springfield. The area voluntary agencies (VOLAGs) resettling refugees are Jewish Family Services of Springfield, Jewish Federation of the Berkshires and Lutheran Social Services, which also manages resettlement for Episcopal Migration Ministries.

Language and cultural differences can be barriers to established services for newly arrived refugees. Over time, local collaborations have developed to determine and address community needs and to form organizational linkages. Some of these are described below.

Two of the four Community Health Network Areas (CHNAs) in the region have worked on refugee-specific issues. In April 2001, over 60 people attended a forum on medical interpreting and advocacy sponsored by the Greater Springfield CHNA, which has had a language access initiative since 1999. The Westfield CHNA has been actively involved in the Westfield Russian-Ukrainian Planning Group's Health Committee.

The Westfield Russian-Ukrainian Planning Group includes members from local and state governments, refugee mutual assistance associations, community-based organizations, resettlement agencies, and health providers. Committees on housing, education, health, families/parenting and cultural events have worked more intensively in these areas. Currently, the health committee is developing a bilingual English/Russian service directory.

Through the leadership of the Massachusetts Office for Refugees and Immigrants, mainstream and refugee organizations in Western Massachusetts have come together to form the Western Massachusetts Newcomer Resettlement Initiative. The goal is to share existing local networks and resources and to develop effective strategies to support successful integration of newcomer families into the Springfield area. The Initiative hopes to create a "seamless web" of services to support the successful long-term integration of newcomer families and communities; increase local awareness of refugee and immigrant communities, their need to obtain long-term self-sufficiency and their potential contribution to local communities; share existing resources and bring additional resources to support newcomer integration; and develop a model of collaboration that might be replicated locally or nationally.

The Refugee Advocacy Group on Domestic Violence meets monthly, also bringing together diverse community groups. Activities have included workshops on Russian, Bosnian, and Vietnamese communities and development of a protocol for collaboration between police and newcomers.

The Refugee and Immigrant Health Program has five staff based at the Northampton DPH regional office. As regional coordinator, Magda Ahmed supervises community outreach educators and works to ensure that refugees receive appropriate health services related to initial health assessment, special medical needs, tuberculosis testing and treatment, and primary care. She works closely with local health departments and health providers. Four bilingual, bicultural outreach educators function as resources to both refugees and providers. Halida Begovic works with Bosnian refugees, Duong Chu with Vietnamese, and Svetlana Melnichuk and Oksana Posnik with Ukrainian and Russian-speaking communities.

Persons interested in participating in any of the initiatives or additional information may contact Magda Ahmed at 413-586-7525. Information on the Western Massachusetts Newcomer Resettlement Initiative is available from the Office for Refugees and Immigrants at 617-727-7888.

Resource Corner

The Cultural Orientation Project www.culturalorientation.net

The Cultural Orientation Project is a web resource that was established to create linkages between overseas providers of cultural orientation training for refugees who will be resettled in the United States and for domestic resettlement programs. The site has general information that is valuable to a wide range of providers who see refugees, including an overview of the United States Refugee Resettlement Program and fact sheets with country and cultural information on specific refugee groups. For example, there is a recently prepared fact sheet on refugees from Sudan. The refugee related resource links are comprehensive and facilitate further exploration of refugee topics.

Cultural Orientation Trainers continued from page one

medical hold for treatment of active disease are "cleared" and the general sense among refugees is that they, therefore, do not have TB. Once in the U.S., refugees are tested for latent TB infection and, for many, a six to nine month treatment is recommended. It was agreed that a strategy overseas that lets refugees know that there will be additional testing for TB in the U.S. would be helpful in promoting understanding of public health activities. In turn, Boston-based staff were provided with a unique opportunity for updates on refugees being processed through posts in the Middle East.

Rifampin-PZA Alert!

Based on the new ATS/CDC Guidelines (MMWR 2000; 49:RR-6 i-51) on targeted testing and treatment of latent TB infection, the MDPH has promoted the use of two-months rifampin-PZA (2-RZ) as an alternative to 6 to 9 months of INH for many adult and adolescent patients. However, CDC has recently reported fatal and severe hepatotoxicity associated with the 2-RZ regimen (MMWR 2001; 50:289-293). In addition, three cases of hepatotoxicity in patients on this regimen have been reported in Massachusetts.

In response, the CDC is now asking state health departments to collect data on toxicity associated with all regimens for LTBI; since, it is unclear whether the rate of hepatotoxicity is greater than due to INH alone. Preliminary studies among HIV-infected patients did not show excessive toxicity and the same drugs have been routinely used for many years (together with ethambutol and INH) for active TB, with low (<5%) toxicity. The recommended dose of PZA for LTBI (15-20 mg/kg) is less than the dose used routinely for active TB (20-30 mg/kg) because of concerns about drug tolerance.

While CDC and others investigate the issue further, we suggest the following:

1. Carefully analyze the risk-benefit for each patient who is tested and treated for LTBI so that only truly high-risk persons are tested and treated.
2. Carefully evaluate the pre-treatment history for hepatitis, chronic liver disease, and hepatitis risk factors, such as injecting drug use. Be sure that a qualified interpreter is available when needed. In patients at risk, screening for chronic hepatitis B and hepatitis C is warranted.
3. Baseline liver function tests are indicated for patients with known liver disease or any risk factors. Baseline liver functions on all LTBI patients receiving 2-RZ is an option under consideration in Massachusetts, but the relevance of baseline testing to hepatotoxicity and on patient acceptance of LTBI treatment is not as yet clear. If baseline liver function is abnormal, treatment of latent infection (with periodic biochemical monitoring) should proceed only when justified by the high risk of tuberculosis, as in immunocompromised persons.
4. Give clear, repeated messages to patients (and providers) on the need to stop therapy promptly with the onset of any new symptoms while on treatment. Continuation of the drugs after the onset of symptoms can lead to accelerated liver injury.
5. Provide close clinical monitoring during therapy. Neither the MDPH nor CDC is recommending *routine* biochemical monitoring, except for patients at increased risk for hepatotoxicity.

The new, shorter 2-RZ regimen has greatly increased the completion rate of treatment of LTBI, from 50-60% with 6-months INH to nearly 80% in one Massachusetts clinic where it has been used frequently. Unlike INH, there is no established age-related toxicity associated with RZ, so that it is potentially useful in older patients for whom treatment of LTBI is indicated.

Although MDPH and CDC are actively collecting data on toxicity with all LTBI regimens, there have been no changes in current recommendations. MDPH will keep you informed as toxicity data is collected and analyzed. As questions arise, please E-mail Dr. Nardell at edward.nardell@state.ma.us.

Save the dates

Regional TB Today Course

A Regional TB Today course will be held on September 12-14 at the J. Erick Jonsson Center of The National Academy of Sciences in Woods Hole, Massachusetts. This course is for physicians, nurses and program managers caring for patients with latent TB infection and TB disease or who are engaged in TB prevention and control activities. Applicants from the entire northeast region of the US are welcome.

Regional TB Update

The next Regional TB Update will be at the Lawrence General Hospital in Lawrence on Thursday, September 20, 2001.

2001 Satellite Courses

All Satellite courses will be held at the UMass Medical School Campus at the State Laboratory Institute in Jamaica Plain, MA. There is planning for multiple sites throughout the state. Contact Walt Lasota at (617) 983-6834 or walter.lasota@state.ma.us for more information on the satellite courses.

Flu & Pneumonia Immunization in Nursing Homes: August 24, 2001 from 1:00 PM to 3:30 PM ET. Sponsored by DHHS/HCFA - Medicare.

Immunization Update 2001: September 20, 2001 from 9:00 AM to 11:30 AM and Noon to 2:30 PM EDT. Sponsored by CDC/PHTN.

Vaccinations for International Travel: December 13, 2001 from noon to 3:30 PM EST. Sponsored by CDC/PHTN.

Antibiotics: Yesterday, Today & Tomorrow

October 17, 2001 from 8:00 AM to 4:00 PM at the Burlington Marriott in Burlington, MA. Contact Jacki Dooley at (617) 983-6559 or jacqueline.dooley@state.ma.us for more information.

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Return Service Requested

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For the past 15 years salmonella infections were often thought to be particularly associated with consumption of improperly cooked chicken and egg products. However, in light of this investigation, MDPH recommends that physicians and health care providers consider other sources of exposure when diagnosing salmonella infections. Undercooked beef and raw milk may be important potential sources of salmonella infection, and they should be considered when taking case histories. This situation also provides the opportunity to emphasize the importance of handwashing to prevent infectious diseases and the prudent antibiotic use in humans and animals to curtail the emergence of multi-drug resistant infections.

COMMUNICABLE DISEASE UPDATE is a free quarterly publication of the Bureau of CommunicableDisease Control, Massachusetts Department of Public Health.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 9, No.3 Fall 2001

Results of 2000 Immunization Assessments

The Massachusetts Immunization Program (MIP) has been conducting immunization assessments in pediatric provider offices and community health centers since 1993. A site visit consists of an assessment of Vaccines for Children (VFC) compliance, proper storage and handling of vaccines, and immunization levels of 2-year-olds in the practice.

In 2000, the MIP adopted a new methodology, lot quality assurance (LQA), whereby a small number of charts are assessed at each site, and a site passes or fails the assessment based on a predetermined threshold. This methodology enabled the MIP to increase the number of site visits from 74 in 1990-1999, to 262 in 2000. Of the 262 sites assessed in 2000, 213 (81%) passed, and 49 (19%) did not meet the standard. The MIP intends to conduct an immunization assessment at every pediatric provider site in Massachusetts by 2004. In 2001, the MIP will conduct at least 370 immunization assessments. Each practice, regardless of their performance, will receive a quality assurance feedback session from an MIP staff member on the day of the assessment. Two recent initiatives will strengthen the quality assurance portion of the immunization assessment. First, the MIP revised the data collection and analysis algorithm. It now enables quick and easy identification of barriers to immunization, as well as strategies that a practice can initiate to improve and maintain immunization levels. Second, a document entitled, *Immunization Best Practices*, summarizes evidence-based, successful strategies identified in the medical literature for improving and maintaining immunization levels. The *Immunization Best Practices* document focuses on the importance of decreasing missed opportunities for immunization, conducting reminder/recall, and accurate documentation as important ways to improve immunization levels. It also encourages providers to designate an "immunization champion"; to educate themselves, their staff and their patients; and to adhere to minimum interval and ages for antigens.

Copies of the *Immunization Best Practices* document, other immunization materials, and further information about the MIP's immunization assessment process can be obtained from the MIP by calling 617-983-6800 or toll-free 888-658-2850. It is also available on the MIP web site, www.state.ma.us/dph.

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Hospital Interpreter Services Update: Regulations and Best Practices

On June 26, 2001, the Public Health Council approved final Massachusetts Department of Public Health (MDPH) regulations governing the provision of competent interpreter services in Emergency Departments of Massachusetts Hospitals (105 CMR 130.1100 et Seq.). The regulations follow enactment of Chapter 66 of the Acts of 2000, "An Act Requiring Competent Interpreter Services in the Delivery of Certain Acute Health Services". As noted in the Division of Health Care Quality circular letter (DHCQ 01-07-414), the regulations have the following features:

- Hospitals must designate a coordinator of interpreter services with overall responsibility for the operation of the program.
- Hospitals must provide notices and signage informing persons coming to the emergency department of their right to interpreter services.

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Epidemiology

Public Health Risks of Keeping Wildlife as Pets

Recently the Massachusetts Department of Public Health (MDPH) has been involved in several situations involving individuals keeping wild animals, such as baby raccoons, opossums or woodchucks, as family pets. Often, these animals become ill and are submitted to the State Laboratory Institute for rabies testing. If one of these animals tests positive for rabies, any exposed individual (in some cases, hundreds of people) must receive rabies post exposure prophylaxis. Post exposure prophylaxis entails a series of 5 shots of vaccine and one dose of immune globulin over a period of 28 days.

Young animals often appear cute, harmless and tame. But, as most people discover, wild animals are not domesticated animals, not as civilized, and will often revert to aggressive and destructive behavior as they mature. Often, these animals become a health risk to humans. It is important to teach children, in particular, to avoid contact with wildlife.

It is against both state and federal law to possess wild birds or mammals without an appropriate permit and there are no permits available for keeping any wildlife species as pets. These laws are in place to protect humans from the aggressiveness of undomesticated wildlife and possible health risks, and to protect the animals from abuse or improper care.

Wildlife can carry serious and sometimes fatal diseases that can be passed to humans, especially children. Even infant animals can carry viruses, bacteria, and parasites that can affect humans. An animal does not have to appear ill to be a carrier of the infectious agents that cause rabies, tularemia (rabbit fever), psittacosis (parrot fever) and plague.

Rabies is often the public health matter of most concern in wildlife. Without proper vaccination before the onset of symptoms, rabies is 100% fatal. In wildlife, the rabies virus can be passed from mother to offspring and in some cases the mother's demise with rabies may be the reason the young were orphaned. The rabies virus is usually transmitted to humans through an infectious animal's saliva introduced by a bite. The virus can be transmitted to humans through breaks in the skin, such as abrasions or cuts, or through a mucous membrane (eyes, nose and mouth). Bites, scratches, and licking by a rabid animal, or not washing one,s hands after exposure to the saliva of a rabid animal and then touching one's eyes, nose or mouth are all potential routes of rabies transmission.

Raccoons can be infected with a particular type of parasitic roundworm that can cause serious illness in humans. An adult worm lays eggs that are shed in the raccoon's feces. These eggs can be very difficult to destroy. Close contact with raccoons and their excrement puts people at risk.

If you already have a wild animal as a pet, please contact your local or state health department to discuss the human risks. Since there is no approved rabies vaccine for wildlife and the incubation period of the virus in wildlife is unknown, it is likely that testing the animal will be recommended. If you observe a hurt or abandoned animal, avoid any contact and call your local animal control officer or the nearest wildlife rehabilitator (http://www.state.ma.us/dfwele/dfw/Dfw_rehab.htm). There are very few veterinarians who will treat wild animals, especially wildlife held without a permit.

Hepatitis C Hotline

In early May of 2001, the MDPH-funded Hepatitis C Hotline began taking calls. This service can answer questions about viral hepatitis, counsel people who are infected with or affected by hepatitis C, and provide referrals to related programs. The hotline's hours of operation are from 9am to 9pm, Monday through Friday and from 10am to 2pm on Saturdays. Staff are available to answer calls in English and Spanish at all times, Portuguese Mon - Fri, and in other languages, as available. The toll-free number to call is 1-888-443-HepC (4372).

New Lyme Disease Website!

In April 2001, the Massachusetts Department of Public Health (MDPH) posted a new website <www.state.ma.us/dph/cdc/epii/lyme/lymehp.htm> with information on Lyme disease for health care providers and the general public. The site is divided into six sections including Lyme disease surveillance statistics for Massachusetts and the United States, clinical information for health care providers, Lyme disease vaccine, the MDPH Lyme disease surveillance program, MDPH Lyme disease educational materials for the general public, and online Lyme disease resources. In the future, the site will be expanded to contain information on other tick-borne diseases. If you have any comments on the site, please call the MDPH Division of Epidemiology and Immunization at 617-983-6800.

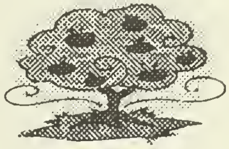
Men Who Have Sex with Men, and Syphilis Elimination in Massachusetts

The decline of syphilis among men who have sex with men (MSM) was one of the public health success stories of the 1990s. In Massachusetts, MSM accounted for approximately 50% of the infectious syphilis that was reported in the late 1970s and early 1980s. With community mobilization and public information and educational efforts aimed specifically at HIV/AIDS, rates of infectious syphilis declined precipitously. By the mid-1990s, less than 1% of infectious syphilis was reported in MSM. This decline occurred at the same time that surveillance for STD in general, and syphilis in particular, improved.

However, the situation changed in 1999. Although reported infectious syphilis cases were at the lowest level since surveillance began in 1918, six of the 97 cases were in MSM (8%). In 2000, there was an increase in the number of reported syphilis cases to 139, of which 34 were in MSM (25%). In the first six months of 2001, there have been 49 cases of infectious syphilis reported, with 15 (31%) in MSM. While absolute numbers of syphilis cases remains low, the proportion of cases in MSM continues to increase.

Syphilis among MSM could foreshadow an increase of HIV infection. Many of the reported syphilis cases relate to seeking partners in venues, such as Internet chat rooms, bathhouses, bars, parties and social gatherings. The Massachusetts Department of Public Health has been working with community groups to produce and distribute appropriate health education materials and messages to those MSM at greater risk.

- The HIV/AIDS Bureau of MDPH and the AIDS Action Committee have brought to bear resources and have provided syphilis prevention posters for MSM bars around the state.
- A "Syphilis Alert" was sent to clinicians statewide.
- Six regional "Syphilis Elimination Forums" were held this past spring in order to generate interest in the issue and obtain input.
- Communication with the other states and cities has helped all programs to learn from experience of the others.
- A statewide Public Health Advisory Group to Eliminate Syphilis is being formed.
- The Region I STD/HIV Prevention Training Center held a telephone conference on syphilis elimination.
- AIDS Action Committee assisted in the distribution of syphilis prevention brochures during the Gay Pride celebrations in Boston.
- Men of Color Against AIDS (MOCAA) is assisting in developing and coordinating outreach.
- The Latino Health Institute has distributed materials at a Latino MSM Retreat that took place in Provincetown.
- A surveillance project is underway, in conjunction with the Fenway Community Health to help improve intervention strategies.



APIC-New England Marks 25th Anniversary

The Association of Professionals in Infection Control and Epidemiology - New England Chapter (APIC-NE) is celebrating its 25th year as the first chapter of the national APIC, founded on January 1, 1976. Organized by twelve infection control nurses in 1975, the chapter now has approximately 500 members across New England. It was the model chapter for the 11,000 member national organization that now includes 112 active chapters.

APIC-NE members have been at the forefront of infection control practice on regional, national and international levels. The chapter has been instrumental in the evolution and development of the profession of infection control. Working closely with local and state public health departments, as well as with the Centers for Disease Control and Prevention, APIC members and APIC-NE have taken a leadership role in disease surveillance and control in the community, as well as in the facilities in which most members are based. Close working relationships and day-to-day communication between infection control professionals and health departments have been of critical value to effective communicable disease control. APIC-NE and the community of infection control professionals it represents are at the core of a network of knowledgeable and committed specialists across the communities of New England.

Public health departments at the local and state level recognize the critical role that the members of APIC-NE play in communicable disease control and improving health

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Vaccine Quality Control at Provider Sites

Massachusetts is one of only eleven universal vaccine distribution states, providing all of the American Academy of Pediatrics (AAP) and Advisory Committee on Immunization Practices (ACIP) recommended childhood vaccines, free-of-charge, to all children through 18 years of age, at public and private provider sites. Our state's consistently high immunization coverage levels are due, in part, to universal childhood vaccine distribution.

Since 1996, the Massachusetts Immunization Program (MIP) has expanded its quality control program to ensure that vaccines are being handled and stored appropriately. This includes disseminating temperature logs, refrigerator magnets with the proper storage temperature listed, informational flyers, regional trainings statewide (with approved CEU and CME credit hours), and vaccine management assessments. During 2001, MIP staff will conduct vaccine management assessments at more than 500 sites, including all local vaccine depots and over 350 private pediatric provider sites.

The vaccine management assessment is designed to be educational for provider site staff. It is usually done in conjunction with an immunization assessment site visit, which reviews the immunization levels of a sample of the two-year-old's records. It includes a review of vaccine administration documentation, use of Vaccine Information Statements (VIS), accountability for the vaccine on the Vaccine Usage Report (bubble sheet) and Vaccine Order Form, and appropriate storage and handling of vaccines.

The most common vaccine management deficiency is refrigerated vaccine that has not been stored within the proper temperature range (2°C to 8°C, or 35°F to 46°F). Over the past three years, approximately 9% of assessed sites stored vaccines at temperatures outside the recommended range. The improperly stored vaccines may become damaged and not have the necessary potency to protect from disease. Revaccination had to be considered.

Providers are randomly selected for an immunization assessment/vaccine management site visit, but the MIP would welcome the opportunity to visit any site and educate staff (perhaps at a staff meeting) on the proper storage and handling of vaccines, and the risks associated with improper storage. If you are interested, please contact the MIP/Vaccine Management Unit at (617) 983-6828 to arrange a convenient time.

2001-2002 Influenza Vaccine Availability

The Massachusetts Immunization Program (MIP) is planning to distribute 740,000 doses of influenza vaccine for the 2001-2002 season; which is 65,000 more doses than last season. However, availability of influenza vaccine will be delayed again. The MIP will be receiving influenza vaccine in multiple shipments. The first shipment (approximately 25% of total purchase) is anticipated by mid/late September. The MIP has been notified that it will most likely not receive the bulk of vaccine until November. Therefore, providers will be receiving their state-supplied influenza vaccine incrementally. Providers will need to prioritize available vaccine to ensure that it is administered first to those who are at greatest risk.

Check the MDPH web site www.state.ma.us/dph for updated information on the availability of influenza vaccine.

No Shortage of Td Vaccine in Massachusetts

While there is a serious shortage of tetanus-diphtheria (Td) vaccine elsewhere in the U.S. that is expected to last through 2001, there is no shortage of Td vaccine in Massachusetts because the Massachusetts Biologic Laboratories (University of Massachusetts Medical School) manufacture Td vaccine for use in Massachusetts. Providers should continue to give routine Td boosters to adolescents and adults.

In addition, students entering 7th grade or college in Massachusetts are still required to have a Td booster. Massachusetts residents who receive medical care in bordering states are advised to seek Td vaccination at urgent care centers or at other providers within Massachusetts. Schools and colleges in Massachusetts may wish to provide Td vaccination clinics for out of state students who are unable to be vaccinated prior to the start of the school year.

If you are currently enrolled in the Massachusetts Immunization Program (MIP), you may order free state-supplied Td vaccine from your local vaccine distributor. Sites interested in enrolling in the MIP should call the MIP Vaccine Management Unit at 617-983-6828. If you have any questions regarding Td vaccine, please call the MIP at (617) 983-6800 or toll free at (888) 658-2850.

TB Exposure in a Day-care Setting

A 25 year-old woman with symptoms of cough and fever was diagnosed and treated for pneumonia at a local emergency department (ED). Three months later, the young woman again presented to the ED with fever, weight loss and a productive cough of 3 months duration. At this time, she was admitted to the hospital and subsequent diagnostic tests supported a diagnosis of active, infectious, pulmonary tuberculosis.

Because of the infectious nature of this case, a contact investigation was undertaken. An interview was conducted to determine the case's daily routine at home, socially and at work. The local health department began the process of identifying those people who had spent significant amounts of time with the case and had the potential of being infected due to the exposure. The young woman worked as a teacher's aide at a large day-care center, and rotated through various classrooms on a regular basis. An intensive investigation was conducted at the day-care center.

Public health nurses from the local health department and the TB Division met with administrators of the day-care center to discuss the exposure and to begin screening those children and teachers potentially exposed to the case. This was a high profile and sensitive situation as it involved a day care center with approximately 500 children under the age of five years. This investigation required expertise, collaboration and communication among agencies and the public, and numerous resources to ensure that the children and adults who were exposed to the case received timely and appropriate evaluations. Over two hundred sixty (260) children were identified as contacts. Notices were sent to the parents and/or guardians, record reviews were conducted to obtain past tuberculin skin test results (TSTs) and educational sessions were held in conjunction with the initial screenings of the children.

Are there special precautions that must be considered when young children have been exposed to TB?

Children under five years of age, regardless of initial TST results, must have a chest x-ray to rule out active disease. If the initial TST is positive and the chest x-ray is normal, the children are placed on INH therapy for 9 months. If the initial TST is negative and the chest x-ray is normal, treatment (window prophylaxis) for "possible latent TB infection" is recommended until the results of a follow-up TST, 8-12 weeks post-exposure are known. If the repeat (follow-up TST) is negative, then the treatment is discontinued. Abnormal chest x-rays, regardless of TST status, require further evaluation.

Why treat children who have an initial negative TST? Children (and adults) who have recently been exposed to TB may have a negative reaction to the TST if tested less than 12 weeks since their last exposure, even if they are truly infected. This is because it can take up to 12 weeks for the immune system to respond. Children are treated more aggressively because they have a higher risk of progressing to disease once infected and are more likely to have serious complications if they develop disease.

Remember ....

Often we receive many CD Updates returned to our office. Report any name or address changes to your Communicable Disease Update subscription to our office. Call or email Jacki Dooley at (617) 983-6559 or jacqueline.dooley@state.ma.us to keep your subscriptions coming to you!

APIC 25th Anniversary continued from page three

outcomes in individuals and the community. It is impossible to imagine how we would have achieved the progress made in the surveillance and control of infection in the past 25 years without the support and participation of the professional infection control community. APIC-NE has also been a strong advocate for public health. The Massachusetts Department of Public Health salutes APIC-NE on completion of its first 25 years and looks forward to continued and enhanced collaboration as we face the challenges of the future.

For more information about APIC-NE and its activities, visit its website at www.apicne.org.

Refugee & Immigrant Health

Refugees in Central Massachusetts

Central Massachusetts was the destination for over 550 refugees during the four-year period of July 1, 1997 through June 30, 2001. While this number represents less than 6% of all resettlement in the Commonwealth, it is nonetheless a significant commitment to welcoming newcomers. Refugees from 23 different countries were resettled in the region, three-quarters from one of three primary countries: 33% (185 persons) from the former Yugoslavia, including Bosnia and Kosovo, 22% (124 persons) from Vietnam, and 20% (121 persons) from Liberia. Previous to 1997, most refugees resettled in this area were from Southeast Asia.

Nineteen cities and towns in the Central region were the initial destination for newly arrived refugees. Worcester was the new home for the majority (71%). With the exception of Shrewsbury, the 18 remaining towns received fewer than ten refugees each over this four-year period.

Three large voluntary agencies or VOLAGs - the agencies responsible for resettling refugees - have affiliate offices in Worcester. They are the United States Catholic Conference (Catholic Charities of Worcester), the Hebrew Immigrant Aid Society (Worcester Jewish Federation) and the International Rescue Committee. While Lutheran Social Services provides a range of refugee services through their office in Worcester, their West Springfield office manages resettlement in this area.

Among the many responsibilities of the VOLAG caseworker is making arrangements for the initial health assessment. The assessment serves to introduce the refugee to the U.S. health care system and to identify conditions that require follow-up, either through the public health system or primary care. Great Brook Valley Health Center in Worcester has the refugee health assessment contract for the Central region. The health center has successfully evaluated 97% of the refugees referred for services.

The Refugee and Immigrant Health Program has five staff based in the Tewksbury Regional Office to cover both the Central and Northeast regions. As regional coordinator, Bich Ngoc Vu supervises community outreach educators and works to ensure that refugees receive appropriate health services related to initial health assessment, special medical needs, tuberculosis testing and treatment, and primary care. She works closely with local health departments and health care providers. Four bilingual, bicultural outreach educators function as resources to both refugees and providers. Hoang Kim Tran and Astrit Seiti work primarily in Worcester with Vietnamese and Albanian-speaking communities, respectively. They also work with the Worcester Health Department and the Getchell-Ward Tuberculosis Clinic at Family Health and Social Services. Sovannary Lak and Toy Vongpheth work primarily in the Merrimack Valley with Cambodians and Lao, respectively. They are also able to provide support, as needed, to providers and refugees in the Central region.

Persons interested in additional information may contact Bich Ngoc Vu at 978-851-7261.

Visit Us On The Web!

Electronic copies of Communicable Disease Update can be found on the world wide web at www.state.ma.us/dph/cdc/update/comnews.htm. Current and past issues are available at the above web address.

Interpreter Regulations *continued from page one*

- Hospitals must conduct an annual language needs assessment in their service areas.
- Hospitals must assure that interpreters have received appropriate training in the skills and ethics of interpreting.
- Hospitals must refrain from encouraging the use of family members for interpreting, and are prohibited from using minor children.

A document, Best Practice Recommendations for Hospital-Based Interpreter Services, was developed to accompany the regulations and to serve as a resource to hospitals. The document was developed by MDPH, in consultation with a broad array of organizations active in promoting the provision of competent interpreter services. The major purpose of the document is to identify and describe the components of an optimal interpreter services program for hospitals - both for emergency services (in compliance with the regulations) and for other hospital-based clinical services.

The regulations and best practice recommendations can be found on the MDPH website www.state.ma.us/dph/bhqm/licregs.htm.

Questions about the regulations should be directed to Gail Palmeri, Manager of the Hospital Licensure Program, at (617) 753-8000. Additional information on the best practices document is available from Brunilda Torres, Director of the Office of Minority Health, at (617) 624-5272.

Harvard Hosts a Unique Summer Program in Global TB Control Leadership

During July and August of this year, Harvard Medical School's Program in Infectious Diseases and Social Change (Department of Social Medicine) hosted a unique educational program entitled, "Global Health Leaders Fellowship" or GHLF. The program brought to Boston eight high-level physicians and scientists involved in international tuberculosis control, four from Russia, and four from Peru, two countries where Partners in Health (PIH), a charitable non-governmental organization based in Boston, is working to control multidrug-resistant (MDR) TB. These pioneering efforts to control MDR-TB in resource-limited countries are made possible through funding from the Bill and Melinda Gates Foundation and other sources. Joining the Peruvian and Russian leaders in the summer program were four medical residents from the Brigham and Woman's Hospital (BWH), who are committed to working in international health.

It was a busy two months for the international visitors, with little time for sightseeing. Their days began with intensive courses in biostatistics and epidemiology - part of the annual summer "Clinical Effectiveness" program at the Harvard School of Public Health. A course requirement was the design of a clinical research project using the principles learned in class. Whereas the projects that most of the summer students planned will never progress beyond academic exercises, those planned by the GHLF fellows will actually be carried out in their home countries. Each project is to be joined by a BWH resident. The afternoons were filled with discussions specific to international TB control and planning research projects. In addition to local experts from Harvard, Boston University School of Public Health and Massachusetts Department of Public Health, research mentors and discussants came from the Centers for Disease Control in Atlanta. GHLF fellows toured the MDPH Mycobacteriology Reference Laboratory (also a WHO-certified international reference laboratory) and the Lemuel Shattuck Hospital, an MDPH facility with specialized capacity and expertise for treating MDR-TB and other difficult cases.

The fellows were a heterogeneous group, with backgrounds that included pulmonary and infectious diseases, as might be expected, but also psychiatry and medical anthropology. Anyone who works in TB control understands that barriers to successful control go beyond medical treatment and include behavioral and cultural issues. Partners in Health stresses that global economic inequities are the main obstacle to better health among the poor. Paul Farmer's *Infections and Inequalities* and Jim Kim's *Dying for Growth* are two recent books by the co-founders of PIH that discuss the fundamental problems that this summer course addressed.

Northeast Regional Clinical Services Highlight

Tuberculosis Surveillance Area (TSA 3)

TSA Nurse: Nancy J. Taylor-Flynn, R.N., B.S.N.
Administrative Assistant: Constance Parke

In 2000 there were 285 verified incident cases of tuberculosis in Massachusetts, of which 48 were in people who resided in the Northeast Region. Higher risk communities in TSA 3 include Lawrence, Lowell, Lynn and Malden. The TB Division funds 26 TB clinics throughout the state, four of which are located in TSA 3 (Lawrence, Lowell, Malden, Salem). This Update issue will highlight one, the North Shore Pulmonary Clinic (NSPC) located at the Salem Hospital in Salem.

This clinic serves a large area consisting of the following cities and towns: Amesbury, Beverly, Danvers, Essex, Gloucester, Hamilton, Ipswich, Lynn, Lynnfield, Manchester By the Sea, Marblehead, Middleton, Nahant, Newbury, Peabody, Rockport, Rowley, Salem, Salisbury, Saugus, Swampscott, Topsfield, Wenham and West Newbury. Christine Blaski, MD, (Director), Peter Kirkpatrick, MD, Faysal Hasan, MD, Neil Shore, MD, Peter Thielhelm, MD and Alexander White, MD provide medical coverage.

Karolyn Jernigan, RN, current Clinic Manager, recently accepted a position in the California State TB Program. Shean Marley, RN Clinical Coordinator of Outreach Education Services will assume clinic management. Angela McCarty, RN provides nursing services at the clinic site. Mary Jane Thomas provides secretarial services.

Clinic services are provided twice weekly on Monday and Wednesday from 9:00 AM to 4:00 PM. Late afternoon clinic hours at NSPC and Lynn Health Department are an added benefit. Multidisciplinary patient care conferences and quarterly meetings are held on a regular basis. Transportation via shuttle bus from Lynn City Hall is provided on Mondays, and public transportation or taxi vouchers are provided as needed.

The clinic is accessible to the diverse at-risk populations it serves, with interpreter services provided.

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Save the dates

2001 Satellite Courses

All Satellite courses will be held at the UMass Medical School Campus at the State Laboratory Institute in Jamaica Plain, MA. Satellite courses may be offered at multiple sites throughout the state. Contact Walt Lasota at (617) 983-6834 or walter.lasota@state.ma.us for more information on the satellite courses.

Satellite courses scheduled for Fall 2001:
Vaccinations for International Travel: December 13, 2001 from noon to 3:30 PM EST. Sponsored by CDC/PHTN.

Antibiotics: Yesterday, Today & Tomorrow

October 17, 2001 from 8:00 AM to 4:00 PM at the Burlington Marriott in Burlington, MA. Contact the Northeast Office of National Laboratory Training Network at (617) 983-6285 for more information.

Conference on Refugee Women's Health

October 29, 2001 at the Massachusetts Medical Society. For more information, contact the Refugee and Immigrant Health Program at (617) 983-6590.

COMMUNICABLE DISEASE UPDATE is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.

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Communicable Disease UPDATE

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Bioterrorism Questions and Answers

Q. What is bioterrorism?
A. Bioterrorism is the intentional use (or threatened use) of biological agents to hurt people, create fear, and/or disrupt society.

Q. Have any bioterrorism incidents occurred in Massachusetts?
A. There have been many hoaxes, but no evidence of any intentional release of dangerous microbes. To cause infection and to make many people sick, a person would have to have access to specialized equipment and processes. It is difficult to successfully disperse a biological agent into the air in a way that could harm many people.

Q. Should I keep a supply of antibiotics in my home in case there is a biological attack?
A. No. Antibiotics can be harmful if not used appropriately and can actually mask symptoms of disease if incorrectly used. In addition, many strains of bacteria are resistant to some antibiotics. Bacteria that could be used in a terrorist attack may be resistant to specific antibiotics, thereby making the antibiotics useless. There is a current stockpile of antibiotics for two million people and an effective way to deliver them to wherever they are needed. The most effective antibiotics can be made available when needed.

Q. What is anthrax?
A. Anthrax is an infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. The bacteria can infect all warm-blooded animals including man.

Q. How common is anthrax and who can get it?
A. Anthrax is most common in agricultural regions of the world where it occurs in animals. In humans, the naturally occurring disease is usually caused by an occupational exposure to infected animals or their products. Anthrax has not been reported in Massachusetts in over 30 years.

Q. How is anthrax spread?
A. A person may become infected with anthrax by inhaling anthrax spores; by infecting cuts or abrasions

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Air Disinfection: Lessons for the Defense Against Bioterrorism

Air disinfection has been used as a public health strategy against natural airborne infection for many decades. The rationale is to protect workers and others in environments such as hospitals, jails, and homeless shelters, from known, and unsuspected infectious persons. Is that experience applicable to the current bioterrorism threat? It should be, given that anthrax and smallpox are airborne pathogens and have properties in common with other, similar organisms. The applicability is based on considerable public health experience using air disinfection for tuberculosis and for respiratory viruses, such as measles and influenza.

Three technologies are in common use to disinfect air. Mechanical ventilation systems in public buildings dilute and remove infectious particles, although terrorists could also use ventilation ducts as an efficient way to deliver pathogens throughout buildings. However, building ventilation is designed for the comfort of occupants, not to prevent airborne infections. The protection provided is limited by the numbers of possible air changes because of inherent constraints of design, noise, cost, and discomfort.

Air filtration can remove essentially all respiratory pathogens suspended in air that passes through special high-efficiency filters, but getting most of the air in a room through the filter is difficult, especially in large, incompletely mixed occupied spaces. Filtration adds to airflow resistance, increasing the cost of ventilation, and increasing the noise and discomfort of room occupants. Special filters can be used in ventilation ducts, where they can reduce the recirculation of pathogens within

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Epidemiology

Reducing Unneccessary Antibiotics for Children - REACH

REACH Mass is a community education initiative to promote judicious antibiotic use in children and to reduce the prevalence of antibiotic-resistant bacteria. REACH Mass is a collaboration of Harvard Medical School, the Massachusetts Department of Public Health, Harvard Pilgrim Health Care, the Massachusetts Division of Medical Assistance, Tufts Health Plan and Blue Cross and Blue Shield of Massachusetts, Inc. Funded by the Agency for Healthcare Research and Quality, REACH Mass has the approval of the Centers for Disease Control and Prevention and the Massachusetts Chapter of the American Academy of Pediatrics.

REACH Mass has developed a variety of educational materials regarding judicious antibiotic use. Specifically, in collaboration with pediatric clinicians in the 8 intervention communities, REACH Mass is:

- Distributing materials to parents, local day care providers and other selected community organizations.
- Offering pediatric clinicians CME programs that focus on the local problems of antibiotic resistance.
- Providing data to clinicians on current antibiotic prescribing patterns in their communities.

Outcome measures of the study include the incidence of both responsive and resistant bacterial infections, carriage of resistant organisms, as well as rates of antibiotic use.

At the present time, REACH educational materials are available only to the study communities. However, for general information about the Project or referral to other resources, please call the REACH toll-free number at 1-866-281-8906.

For all your influenza information needs

The Massachusetts Department of Public Health has established an influenza information web page with information and links to sites on flu vaccine availability, flu guidelines and recommendations, adult pneumococcal disease and vaccine, and influenza pandemic preparedness planning. You can access this web site by going to www.state.ma.us/dph and clicking on the *Influenza Information* icon.

BT Questions and Answers continued from page one

caused by handling objects that are contaminated by spores; or by swallowing spores by eating undercooked meat from diseased animals. Anthrax is NOT spread person to person.

Q. What are the symptoms of anthrax?
A. The symptoms vary depending upon the type of exposure. *Cutaneous:* Most anthrax infections occur when the bacterium enters the skin. A boil-like lump appears which eventually forms an ulcer with a black center. A swelling of the lymph glands may also occur.
Inhalation: Initial symptoms may resemble influenza. After several days, the symptoms may progress to thos of severe breathing problems and pneumonia. Inhalation anthrax usually results in death in several days after onset of symptoms, if not treated with antibiotics.
Intestinal: The intestinal form of anthrax may follow the consumption of contaminated meat and is characterized by loss of appetite, nausea, vomiting, fever; then abdominal pain, vomiting of blood, and severe diarrhea.

Q. How soon after being infected do symptoms appear?
A. Symptoms of disease usually occur within seven days but occasionally symptoms occur longer after exposure, even up to 45-60 days.

Q. How is anthrax diagnosed?
A. Anthrax is usually diagnosed by identifying the bacteria in blood, skin lesions, or respiratory secretions.

Q. What is the treatment for exposure to anthrax?
A. Ciprofloxacin and doxycycline, given orally for 60 days, are the preferred drugs for postexposure prophylaxis to prevent inhalation anthrax from developing after known exposure.

Q. Is there a vaccine to prevent anthrax?
A. The anthrax vaccine licensed for human use in the United States is a sterile filtrate of cultures of *B. anthracis*. The vaccine is available for people in high-risk occupations, such as military personnel or people who handle animal hides. Anthrax vaccine is not routinely recommended for the general population.

Q. What about smallpox? Should I be immunized?
A. There have been no cases of smallpox in the world in over 20 years. The only two places where the virus is known to exist are in secure facilities in the United States and Russia. There is currently a supply of 15 million doses of smallpox vaccine that could be used to prevent spread of virus should there be a release. This type of use of vaccine was how smallpox was eliminated. Smallpox vaccine is not recommended for routine use because it is not sufficiently available and can cause side effects that would only be tolerable if there was a chance of exposure.

Massachusetts Group Recognized for Excellence in Immunization

The work of the Massachusetts Joint Committee on Adolescent Hepatitis B Immunization of the Massachusetts Chapter of the American Academy of Pediatrics (MCAAP) Immunization Initiative and the Massachusetts Immunization Action Partnership (MIAP) was recognized by the National Partnership for Immunization (NPI) at the 2001 Excellence in Immunization Awards Ceremony held in Washington D.C. in August. Representing the Joint Committee, Hadassa Kubat, D.Sc., accepted the award from Dr. Walter Orenstein, Director, National Immunization Program, CDC, and Anita Boles, Executive Director, National Healthy Mothers, Healthy Babies Coalition.

The purpose of the Joint Committee is to promote catch-up immunization of all adolescent 6th through 12th grade students in Massachusetts with the hepatitis B vaccine. Organizations that participate include the MCAAP Immunization Initiative, Massachusetts Chapters of the School Nurses Association, the Public Health Nurses Association, the National Association of Pediatric Nurse Practitioners (NAPNAP), the School Physicians Association, the Health Officers Association, the Association of School Superintendents, and the Parent Teachers Association (PTA), as well as Rotary Clubs, private schools, the Massachusetts Department of Public Health, the Division of Medical Assistance (Medicaid), GlaxoSmithKline, and Merck. The program was supported by educational grants from the American Liver Foundation, GlaxoSmithKline and Merck. Coalition activities have included: advocacy, mailings to the schools, publication of articles in various newsletters, technical assistance, and development and dissemination of educational materials and tools.

During 1996-2000 more than 350 schools have implemented this program, and hepatitis B vaccine coverage rates of 7th graders have increased from 30% in 1996 to 81% in 2000, while the number of reported cases of hepatitis B among adolescents in Massachusetts has decreased over the same period.

For more information, contact Hadassa Kubat, Project Coordinator, MCAAP Immunization Initiative, at (781) 895-9850.

Change In The Adult Hepatitis B Vaccine Distribution Program

In an effort to streamline the adult hepatitis B vaccine distribution system, the Massachusetts Department of Public Health (MDPH) will begin to distribute only Engerix-B® adult hepatitis B vaccine (Glaxo SmithKline, 20 mcg/1.0 ml) for all programs as soon as supplies of Recombivax HB® adult hepatitis B vaccine (Merck, 10 mcg/1.0 ml) are exhausted. This formulation will be supplied in single dose vials.

The MDPH supplies adult formulation hepatitis B vaccine to: all public provider sites (i.e. local boards of health, community health centers, etc.) for immunization of high-risk adults; colleges for immunization of students over 19 years of age who are to be vaccinated due to the college hepatitis B immunization requirements; and boards of health and state agencies for the immunization of high-risk public safety workers.

Recommendations for Administration of Engerix-B® in Adults

- The correct adult dose of Engerix-B® is 20 mcg or 1.0 ml. The usual dose of hepatitis B vaccine for adults (over 19 years of age) is always 1.0 ml, regardless of the brand being used (the only exception is the special dosages used for dialysis patients and other immunosuppressed adults).

Note: In the past, when hepatitis B formulations have changed, the MDPH has received reports of providers doubling or halving doses. Please remember it is always essential to check the package insert of the product you are using to ensure administration of the correct dose of vaccine

If you have supplies of Recombivax HB®, please use up your existing stock. Recombivax HB® and Engerix-B® are interchangeable, so patients who have started the series with Recombivax HB® can complete the series with Engerix-B®.

If you have any questions regarding this change, please contact the MDPH Vaccine Management Unit at 617-983-6828.

Immunization Update 2002 Workshops

Watch for information coming in the mail during January announcing the *Immunization Update 2002* workshops for physicians, nurses, medical assistants, and other individuals involved with the handling and administration of vaccines. The workshops will be held at several locations throughout the state. There are three topics scheduled for presentation. The three-hour program is **free** and a continental breakfast is provided prior to registration that morning.

The Internet as an Emerging Challenge and Opportunity for STD Prevention

Any time there is a profound change in some aspect of our lives, the impact can have unpredicted effects. The Internet is creating a host of new ways of doing business. It is also creating new challenges and opportunities for STD prevention.

In San Francisco, in 1999, the health department investigated seven cases of infectious syphilis among men who have sex with men (MSM). The men had found sex partners through a website and one or more of the partners were infected with syphilis. The investigation was difficult because no one knew the names of their partners. They only knew their e-mail or website names. The Internet service provider would not release the names of the individuals, citing their responsibility to protect the confidentiality of customers

Since that time, other Internet-related cases of STD have been reported from across the country, including Massachusetts. Cases have occurred in people of many racial, ethnic, and socio-economic groups; heterosexual, homosexual and bisexual. Some surveys have shown that Internet-related cases are more likely to be male, more likely to be MSM, and more likely to engage in higher-risk behaviors than people who do not use the Internet to find sex partners.

There are significant implications of this phenomenon. The concept of "socio-geographic space" has been at the heart of STD epidemiology. People find their sex partners close to where they live and/or work, and people seek partners who are similar to themselves in social characteristics. Use of the Internet to find sex partners is changing this. Often, the only commonality is a visit to the same website. People from different population groups are more likely to find each other through a website than through usual daily travel. Indeed, data show that people from cities a continent away from each other, or from different nations, are connecting through websites or e-mail. Partner choices are broader and social networks are more diverse as a result. Bringing people from different areas together also facilitates the spread of resistant or new strains of microorganisms into other areas.

To meet the challenges of electronic partnering, prevention programs need to improve understanding of the Internet and its capacities among staff. More intensive and collaborative investigations need to be initiated. However, there are opportunities as well. Programs can use the Internet for health education. The power of the Internet can be used to promote healthier behaviors to those already on-line. Adjustment to the new reality of cyber-STD's will require both reactive and proactive use of the Internet.

Measuring Pelvic Inflammatory Disease Surveillance

Surveillance for pelvic inflammatory disease (PID) is affected by four major constraints: difficulty of accurate diagnosis; broad clinical spectrum; diagnosis in a wide variety of clinical settings; and, need for difficult-to-obtain microbiologic data to determine etiology. Administrative data sets contain a variety of data that might be useful for conducting surveillance for pelvic inflammatory disease (PID).

An evaluation was conducted in a large multi-specialty group practice that uses a diagnostic code system in automated outpatient medical records. There were two codes consistent with PID within the system ("unspecified inflammatory disease of pelvic organs and tissues" and "salpingitis and oophoritis"). There were 1,051 patients identified with these codes between 1995 and 1997. A random sample of 215 of these had clinical data abstracted after records were stripped of personal identifiers. The first encounter for each patient was reviewed.

The 1996 Centers for Disease Control and Prevention PID surveillance case definition was used:

All of the following must be present for this case definition:

- Lower abdominal pain
- Lower abdominal tenderness
- Tenderness with motion of the cervix
- Adnexial tenderness

In addition, at least one of the following findings must also be present:

- Meets the surveillance case definition of CT or GC infection
- Temperature greater than 100.4° F
- Leukocytosis greater than 10,000 WBC cells/mm3
- Purulent material in the peritoneal cavity obtained by culdocentesis or laparoscopy
- Pelvic abscess or inflammatory complex detected by bimanual exam or by sonography
- Patient is a sexual contact of a person known to have CT or GC

Only 38 of the 215 (17.7%) cases met the CDC surveillance case definition for PID. All met clinical criteria. The additional data that allowed cases to meet the surveillance case definition were quite variable. The only statistically significant additional findings came as a result of having a CBC or ultrasound done. We concluded that the administrative data could not provide sufficient specificity for the CDC surveillance criteria. Therefore, such data were of limited use for PID surveillance.

You Be The Epi

A 16-year-old male from a West African country arrived in Massachusetts as a refugee. His family had fled his country of origin in 1998 to a neighboring country. Eligible for the Department's Refugee Health Assessment Program (RHAP), he underwent the standard 2-visit evaluation. His history was notable for complaints of cough, fever, and headache for a few days. In addition, he noted an itchy rash on his extremities. He reported having had malaria in the past. His family reported that he had received some immunization as an infant, but had no documentation. He did not have a history of allergies.

Physical examination revealed a well-nourished, well-developed adolescent. Notable findings included small pustules around his neck and in the groin area. Also, he had excoriated papules on his distal extremities. The remainder of his exam was essentially normal. Laboratory studies included microscopy of a single stool specimen for ova and parasites (O & P) and a CBC. He was treated for pustulosis and scabies with oral cephelexin and topical permethrin.

His white blood cell count was 6.0 with 14% eosinophils, for an absolute eosinophil count of 840 (normal <350). His urinalysis revealed no blood or inflammatory cells. His O & P revealed hookworm infection. At his follow-up visit, he was treated with a single oral dose of 500 mg of mebendazole. He was told to have follow-up for his eosinophilia in primary care, after the treatment for hookworm.

Once established in primary care, further studies were done. Repeat CBC revealed an absolute eosinophil count of 684, still high enough to warrant further investigation. Three additional O & P results revealed only non-pathogenic parasites, *Blastocystis hominis*, and *Entamoeba hartmanni*. The clinician ordered serologic testing for antibodies against *Strongyloides steracalis* and *Schistosoma spp*. These tests were both negative. Lastly, given the patient's geographic origins, the clinician ordered serology for anti-filarial antibodies.

Refugees and immigrants come to the U.S. with a number of common health conditions. Some of these conditions (like dental caries, anemia, and diabetes) are quite familiar to U.S. clinicians, but other health conditions are more specific to geographic origins. Examples include intestinal parasites and other infectious diseases that are not prevalent in the U.S. Health screening of refugees and immigrants usually includes complete blood counts that, in addition to anemia, may reveal high levels of blood eosinophilia, defined as ≥ 350 per µl.

The filaria IgG antibody level was nearly three times the upper limit of normal. With this result, the clinician referred the patient for consultation with a tropical medicine specialist. The specialist reordered the serologies for filaria, *Schistosoma* and *Strongyloides* through research laboratories at the NIH and CDC. The serology for *Schistosoma* remained negative; however the *Strongyloides* titer was positive. As treatment for *Strongyloides* is relatively simple, requiring just 1-2 days of oral ivermectin, the clinician prescribed treatment. The filarial serology also was reactive for antibodies against *Onchocerca volvulus*. He then underwent opthalmological examination and skin biopsy to determine the best course of treatment.

As this case illustrates, following a focused evaluation tailored to the patient's specific history can facilitate work-up of eosinophilia. In this case, the patient came from a part of the world with endemic onchocerciasis, other filarial diseases, strongyloidiasis, and schistosomiasis. Evaluation for these infectious etiologies is a reasonable first step before proceeding to other possible etiologies. Typically with parasitic diseases, eosinophilia results from tissue-invasive parasites, not those for which infection is confined to the lumen of the gut. In this case, hookworm combined with scabies might have been enough to have caused eosinophilia; however levels did not drop after treatment. He also did not have any evidence of allergic or atopic diseases, or medication use that might be associated with eosinophilia. Had investigation of common infectious etiologies been unrevealing, further evaluation would have been needed to rule out autoimmune, neoplastic, and other conditions that can produce eosinophilia.

Onchocerciasis is the disease known as "River Blindness." It is caused by the nematode *volvulus*. The disease affects the skin and subcutaneous tissue, lymphatics, and eyes. Simulium black flies transmit larvae through bites. After 6-12 months, subcutaneous nodules form as the adult worms mature. Subsequently, microfiliariae are produced and migrate in the tissues. This may cause chronic, diffuse pruritus itch. Over years, skin can become thickened with pigmentary changes. Infiltration of the eye, and even the optic nerve, can occur and cause photophobia and blindness if untreated. Treatment entails a single dose of ivermectin, which , however, does not kill adult worms only the microfilaria that migrate in tissue. Therefore, treatment must be repeated annually for 5-10 years. Of note, after the diagnosis was discussed with this patient's guardian, his uncle, the uncle reported he, too, had been diagnosed by skin biopsy and treated for onchocerciasis in Africa.

Refugee and Immigrant Health

Changing Rates of Parasites Detected During Refugee Health Assessments

Intestinal parasites are highly prevalent among populations around the world. Among the most common helminths are *Trichuris* (whipworm), *Ascaris*, and hookworms. Refugees, who have fled their homes and often have stayed in crowded refugee camps, are at risk of carrying these infections to the United States. The Refugee Health Assessment Program (RHAP) includes stool microscopy to identify parasitic infections and reimbursement for pharmacy charges associated with their treatment.

Treatment of helminths improves health status, including the growth and nutritional status of children. A recent study has focused on empiric treatment of intestinal parasites and the use of broad-spectrum anti-helminth medication. Albendazole has been promoted as such a broad-spectrum drug with activity against many parasites.

Within one year prior to departing for the U.S., refugees undergo a medical screening evaluation. In 1997, the Centers for Disease Control and Prevention implemented an enhanced medical assessment for a population of Somali refugees in Kenya. After the examination of 390 Barawan Somalis revealed 38% to have intestinal parasites, the CDC implemented treatment of all non-pregnant Barawan women and other Barawan refugees over the age of 2 years with albendazole, 600 mg in a single oral dose prior to departure for the U.S.

Subsequently, in May 1999, the CDC initiated empiric treatment of all refugees departing from Sub-Saharan Africa. In Kenya, departing refugees received their treatment from one of two sources: a single physician contracted to perform the medical assessments or the International Organization for Migration (IOM). The IOM also coordinated the medical assessments of refugees departing from elsewhere in Sub-Saharan Africa. The timing and administration of the albendazole by the single physician is unclear. IOM provides treatment at the time of departure for the U.S.; consequently, during the time subsequent to initiation of the albendazole treatment program, about 80% of all refugees from Sub-Saharan African are known to have received treatment.

Recently, the Refugee and Immigrant Health Program (RIHP) analyzed rates of parasite carriage among refugees from Sub-Saharan Africa. During the RHAP, laboratories detected parasites by microscopy of a single stool specimen collected at health assessment clinical sites throughout Massachusetts. Samples were analyzed for 1,444 refugees. Approximately two-thirds of these departed from Kenya, while the remainder came from other countries, particularly West African countries such as Ghana, Ivory Coast, Sierra Leone and Liberia.

Overall, 51% of African refugees had any parasite detected in the stool, many with multiple parasites. Helminths were detected in the stool of 12% and protozoans in the stool of 65%. The following table shows prevalence rates for specific parasites among all African refugees.

Parasite	Prevalence
Ascaris sp.	1%
Blastocystis hominis	30%
Dientamoeba fragilis	2%
Entamoeba histolytica	4%
Giardia lamblia	12%
Hookworm	1%
Hymenolepis nana	2%
Schistosoma sp.	<1%
Strongyloides stercoralis	<1%
Trichuris trichiura	8%

When refugees were assigned to "treatment" (single-dose albendazole) or "no treatment" groups, the profile of parasitic infections was very different. Those presumed to have received albendazole treatment had parasites 43% of the time, compared with 58% of those who did not receive albendazole (p <.01). The rates of both helminth and protozoan infections were reduced in the albendazole treatment group. Helminth infections dropped from 21 to 4% while protozoan infections dropped from 76 to 56%. Rates for a few common pathogenic parasites were as follows:

	No Albendazole	Albendazole	Odds Ratio and 95% CI
Ascaris sp	2%	0	.04 (0, .3)
Giardia lamblia	17%	4%	0.2 (.1, .3)
Entamoeba histolytica	3%	<1%	0.1 (.0, .2)
Hookworm	2%	0	.06 (.0, .4)
Trichuris trichiura	13%	<1%	.01 (.0, .1)

In summary, the CDC's program of empiric treatment of African refugees appears to be highly successful in reducing rates of intestinal parasites among refugees resettled in Massachusetts, and presumably throughout the U.S. Of note, while albendazole is not as effective in treatment of protozoan infections, rates of infection with important pathogenic protozoans declined in addition to the anticipated reduction in helminth infections. Given the expected cost savings and reduced morbidity, the program should be an important step toward improving the health status of refugees resettling in the U.S.

Tuberculosis Surveillance Area (TSA) 6

TSA Nurse: Carolyn Harris, RN, BS
Administrative Assistant: Debra Thimas
Outreach: Yin Leung (Quincy area)
Jian Yu (Malden area)

The Division has reorganized from five Tuberculosis Surveillance Areas (TSA) to six regions. The new region, TSA 6 (Suburban Boston), will be served from the Canton Regional Health Office and includes the TB clinical services currently provided at Hallmark Medical Center (Malden), Olympus Specialty Hospital (Braintree), and Brighton Marine Caritas (Brighton).

The Division welcomes Carolyn Harris, who is the Tuberculosis Surveillance Area nurse for this new region. Carolyn comes to the Division from the City of Chelsea, where she was the public health nursing supervisor, responsible for all public health nursing activities, including tuberculosis case management. Prior to working in Chelsea, she was a public health nurse in California.

The Division also welcomes Debra Thimas as the Administrative Assistant in the TSA 6 office. Debra has worked for the Division for several years in the Central Office as clerk for one of our research projects.

Air Disinfection continued from page one

buildings, but this application does little to reduce person-to-person transmission of respiratory infections among occupants of the same room. Self-contained room air filtration machines can provide some protection in rooms, but face constraints similar to ventilation in eliminating room air contaminants.

The third and least familiar air disinfection technology is ultraviolet germicidal irradiation (UVGI). This technology has long been used in laboratories and health care facilities, primarily to control tuberculosis, but a wide range of airborne respiratory pathogens are known to be susceptible to inactivation by UVGI. It can be used in ventilation ducts without the flow resistance of high-efficiency filters, but in ducts it faces constraints similar to ventilation in general, i.e., in reducing room contamination quickly and completely.

A unique use of UVGI is to disinfect air in the upper room, above the occupants' heads. Convection currents generated by body heat slowly moves air into the upper room, displacing air that has been disinfected by exposure to UV lamps irradiating only the upper room. Compared to relatively small filters inducts, efficiency is gained because the entire upper room becomes a large disinfecting chamber. Room occupant exposure to UVGI , which does not penetrate human skin, has no significant short or long-term health consequences. This application of UV is ideally suited for lobbies, dormitories, emergency rooms, and other large occupied spaces. UVGI is not well suited for surface decontamination and does not penetrate paper, so it cannot be used to sterilize envelopes or objects. Ionizing radiation is needed for this purpose, as used in the food industry. However, to the extent that UVGI can inactivate infectious particles in the air, it can provide some beneficial effect for large mail sorting, mail processing or other sites.

Spores are generally relatively resistant to UVGI, compared to viruses, ordinary bacteria, and even TB. There is no published data on the UV susceptibility of anthrax spores, but other similar bacteria that form spores are relatively more difficult to kill with UVGI. However, it would be relatively easy to test harmless surrogate spore-forming bacteria to determine the efficacy of upper room or duct UVGI. The smallpox virus in the airborne state should be highly susceptible to UVGI, although again, there are no published data on the matter. However, like influenza, smallpox transmission can occur both by close contact (droplet spread from mucous membrane lesions and from skin lesions) and by the airborne route (cough-generated aerosols). While close contact may have accounted for most natural smallpox spread in the past, it is far less efficient than airborne spread, presumably the method of choice for bioterrorists. There is every reason to believe upper room and duct UVGI will be highly effective against airborne smallpox. Further laboratory research on safe smallpox vaccine strains would be relatively easy with existing facilities. UVGI in ventilation systems and in the upper portion of large occupied rooms could be an important defense against a smallpox attack, and would have the additional benefit of reducing the spread of many common respiratory pathogens. Although air disinfection is never a substitute for other control measures, it can provide backup protection when properly used for the right pathogens.

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Save The Dates

Regional TB Update

The next regional TB conference will be held at Lahey Clinic in Burlington on Thursday, January 31, 2002. For more information call Mary Mahoney at the Tewksbury TB regional office at 617-727-7908 or 978-851-7261.

The regional TB conference for the southeast region will be on May 30, 2002. For more information call Kelly Letendre at the Southeast TB regional office at 617-727-1440 or 508-947-1231.

Regional TB Today Course

A Regional TB Today course will be held on April 8-10, 2002 at the J. Erick Jonsson Center of the National Academy of Sciences in Woods Hole, Massachusetts. This course is for physicians, nurses and program managers caring for patients with latent TB infection and TB disease or engaged in TB prevention and control activities.

Admission to the course is through application. Applicants from the Northeast region of the US are welcome. For more information, call Kathleen Hursen at 617-983-6974 or Marilyn DelValle at 781-828-7090.

Epidemiology and Prevention of Vaccine-Preventable Diseases Satellite Videoconferences - Noon to 3:30 PM

Part 1 - February 28, 2002
Part 2 - March 7, 2002
Part 3 - March 14, 2002
Part 4 - March 21, 2002

Location: Satellite Videoconference viewing will be at the UMass Medical School Campus at the State Lab Insitute in Jamaica Plain, MA. Satellite courses may be offered at multiple sites throughout the state. For more information, call Walt Lasota at (617) 983-6834, or email him at Walter.Lasota@state.ma.us.

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Howard K. Koh, MD, MPH, Commissioner of Public Health

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 10, No.1 Spring 2002

Varicella Vaccine Shortage and Prioritization Recommendations

Currently, there is a nationwide shortage of varicella vaccine with delivery delays from Merck of up to 8 weeks. The manufacturer expects the shortage to continue into the late spring or early summer. While the shortage persists, there are some interim recommendations:

- **For children 12-18 months of age, the Advisory Committee on Immunization Practices recommends that providers delay varicella vaccination until 18 – 24 months of age.**
- All individuals whose varicella vaccination is delayed need to be placed on a recall list, and immunized as soon as vaccine is available.
- Susceptible, unvaccinated children may attend school or child care, if they have written documentation that they are on a recall list.
- Providers should only order a 1-month supply of vaccine at a time, but do not wait for previous orders to arrive before placing subsequent ones.

If varicella vaccine supplies are still not adequate, the ACIP recommends priority for vaccine for the following groups, in this order:

1. High risk children (HIV+, asthma, eczema), the family contacts of immunocompromised persons, health care workers, all other adolescents and adults;
2. Children 5-12 years, prioritizing those attending kindergarten – 3rd grade and 7th –10th grades;
3. Children 2-4 years old, prioritizing those attending child care centers and preschool.

Please remember that all individuals whose vaccination is delayed must be placed on a recall list. Thank you for your cooperation during this difficult period. If you have any questions, please call the MDPH Immunization Program at 617-983-6800 or 888-658-2850.

Anthrax, Airborne Infection, MDPH, and the Passing of Richard L. Riley

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Airborne infection as a vehicle of bioterrorism has been in the news of late. It is little appreciated that our current understanding of airborne infection is remarkably recent and that the Massachusetts Department of Public Health played an important role in the story. This article is prompted by the December 17, 2001 death of Dr. Richard L. Riley, a pioneer in the field.

In the early 1930's, the Massachusetts Department of Public Health was concerned that the stagnant water aerosolized to keep dust down in textile mills might be a source of bacterial infection among workers. A sanitary engineer at Harvard University, William Firth Wells, had developed an air centrifuge to sample air for bacteria, and was commissioned by MDPH to investigate mills. Riley was a Harvard medical student at the time, working with Wells on this project. Wells and Riley cultured bacteria from the air, but more importantly went on to speculate that these airborne particles, called droplet nuclei, might also be the vehicles for person to person airborne contagion of respiratory infections as measles and tuberculosis. Riley co-authored the scientific papers on the textile mill investigation and on the droplet nuclei theory (On Airborne Infection, Study II. Droplets and Droplet Nuclei. Wells, Riley, et. al. Am J Hygiene, 1934:20. 611-18), the first of more than a hundred scientific papers he would go on to write on airborne infection, and also on lung physiology, an area in which he would become equally famous. He became Chairman of the

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Lyme Vaccine Off the Market

LYMErix ®, a vaccine for Lyme disease developed by GlaxoSmithKline Pharmaceuticals, was removed from the market on February 25, 2002. The manufacturer stated that sales of the vaccine were not meeting sufficient levels to make the product sustainable. The vaccine was approved for use in persons aged 15-70 years by the Food and Drug Administration (FDA) in December, 1998.

Hepatitis A Outbreak in Bristol County

In November 2001, the Massachusetts Department of Public Health (MDPH) Division of Epidemiology and Immunization and local health departments investigated an outbreak of hepatitis A in Bristol County after report of seven laboratory-confirmed cases. Extensive case finding identified an additional 46 cases. A case-control study implicated a Swansea restaurant as the location where at least 35 cases may have been exposed. In October 2001, a foodhandler at this establishment had hepatitis A, but transmission risk was thought to be low because bare hand contact with ready-to-eat foods was not reported.

Two cases confirmed in November were foodhandlers at a second food establishment in Swansea. Since both had worked during their infectious period handling ready-to-eat foods, immune globulin (IG) was recommended for patrons who may have been exposed. Over 1600 doses of IG were administered during a 2-day clinic sponsored by Southcoast Health System with assistance from school nurses and surrounding health department and health care facility personnel. IG can prevent hepatitis A if given within 2 weeks of exposure.

In 2001, 347 cases of hepatitis A were reported to MDPH, a significant increase over the average of 183 cases/year reported between 1995 and 2000. Increased case rates occurred in Dukes, Nantucket, and Suffolk counties. Similar increases in incidence were observed in Connecticut and Rhode Island.

The incubation period for hepatitis A is 15-50 days, with an average of 28-30 days. Cases are considered infectious for three weeks, because the virus can be shed in the stool from two weeks prior to symptom onset until one week after symptom onset. Infected foodhandlers need to be carefully interviewed to determine whether their food handling procedures and practices provide a possible risk of transmission. Interviews should be done in a timely manner and include questions about dates worked during the foodhandler's infectious period, job duties, foods prepared during the infectious period (i.e. ready-to-eat foods), whether or not the case had diarrhea, and whether gloves or other barrier protection were used consistently.

Analysis of the outbreak is ongoing and the final report is expected in the first quarter of 2002. For more information about Hepatitis A transmission, go to http://www.state.ma.us/dph/cdc/factsheets/fshepa.pdf .

West Nile Virus Update

National surveillance data for the year 2001 indicate a dramatic expansion of West Nile virus (WNV) activity to 27 states and Washington, D.C. As of November 20, 2001, 53 human cases (four deaths) were attributable to WNV. Three of these cases, including one death, occurred in Massachusetts. In addition, an outbreak of WNV fever occurred in horses in southeastern Massachusetts with 37 laboratory-confirmed cases, among which five horses died of the disease or were euthanized. WNV was also confirmed in 1104 birds and in 25 mosquito pools throughout eastern Massachusetts. One human case of eastern equine encephalitis (EEE) was also confirmed.

While most dead birds will not be collected and tested for WNV in Massachusetts in 2002, tracking their locations will play an integral role in directing surveillance and control efforts. This year, local health officials and the public should report dead birds to the MDPH WNV Information line at **1-866-MASS-WNV (627-7968)**. MDPH staff will notify the caller if the bird is to be tested and coordinate with local health officials to arrange for its safe collection and transport to the State Laboratory Institute (SLI).

Fixed mosquito trap sites will be located in communities that had high WNV activity in 2001. In addition, mosquitoes collected from long-term fixed trap sites in the EEE high-risk areas will be tested for both EEE virus and WNV. MDPH will also increase mosquito collection in areas that demonstrate high dead bird density.

MDPH will inform medical providers about mosquito-borne diseases and will regularly remind them to report suspect cases of encephalitis, meningo-encephalitis and meningitis of unknown etiology, and to submit specimens to the SLI for appropriate testing. In areas of Massachusetts with increased WNV activity, hospital emergency departments will be contacted weekly and case follow-up coordinated with hospital infection control practitioners. Health care providers may report suspect cases to the Division of Epidemiology and Immunization at (617) 983-6800 or through the WNV Information line.

MDPH will post surveillance data to the MDPH web site at www.state.ma.us/dph/. This site will contain data maps, educational materials, the 2002 WNV Surveillance and Control Plan, and detailed information on ways to limit exposure to mosquitoes. Official press releases, local community information and information for providers will be available. Throughout the season, the WNV Information Line will provide access to general WNV information, personal protection recommendations and information on pesticides.

Pneumococcal Conjugate Vaccine (PCV7) Shortage – A Revised Schedule is Recommended

A national PCV7 shortage is expected to continue through the 2nd quarter of 2002. The Advisory Committee on Immunization Practices (ACIP) has issued interim recommendations for a revised schedule for PCV7 until adequate supplies are available (CDC. MMWR. 2001;50:1140-42.) The three key principles that underlie the recommendations are:

1. Providers should decrease the number of doses given to healthy infants, rather than leaving some children completely unprotected.
2. Reductions in PCV7 use need to be made by all providers regardless of the current supply in your office.
3. Providers should reduce the size of their vaccine orders so that available vaccine can be distributed as widely as possible.

Until adequate supplies of PCV7 vaccine are available, the ACIP recommends the following:

1. **The highest risk children < 5 years of age should continue to be vaccinated with a full series of PCV7.** The highest risk groups include children with sickle cell disease and other hemoglobinopathies, anatomic asplenia, chronic disease (including chronic cardiac or pulmonary disease and diabetes mellitus), CSF leak, HIV infection, immunocompromising conditions, immunosuppressive chemotherapy or long-term systemic corticosteroids use, and those who have received a solid organ transplant.

2. **Healthy infants and children, without other risk factors, < 24 months old should receive a decreased number of doses.** The decreased schedule in this age group depends on local vaccine supply and the age at first dose. In Massachusetts, we currently are experiencing a moderate shortage. For children < 6 months of age, PCV7 should be given on a 2, 4 and 6 month schedule and **the 4th dose should be deferred** in all healthy children, without other risk factors, as outlined in the table below. The schedule for children receiving their 1st dose at ≥ 6 months of age is also outlined in the table.

3. **Defer PCV7 for healthy children without risk factors who are 24 – 59 months of age.**

4. **Maintain lists for recall.** Providers should maintain a list of children who need to be recalled to receive additional doses of PCV7. Infants who have only received 2 doses should be prioritized for recall. Those who have received 3 doses and are eligible for their 4th dose would be a second priority group.

5. **Pneumococcal polysaccharide vaccine (PPV23) should not be used in children < 24 months of age.**

Interim PCV7 Schedule During the Vaccine Shortage

Shortage Status	**Massachusetts & Other States Experiencing a *Moderate* Shortage**
Age of First PCV7 Vaccination	*Schedule*
< 6 months	2, 4 and 6 months (defer 4th dose)
7 - 11 months	2 doses given 2 months apart; plus a 12 - 15 month dose
12 - 23 months	2 doses given 2 months apart
≥ 24 months	No PCV7 vaccination

Vaccine Ordering

The Massachusetts Department of Public Health is asking all providers to implement these new recommendations and reduce their PCV7 orders by 25%. In addition, please order only a 1-month supply at a time.

DTaP, Td, and MMR Vaccine Availability Updates

Unlike other parts of the country, Massachusetts is currently not experiencing Td or MMR vaccine shortages, and providers should continue to administer these vaccines according to the usual schedules. However, inventories of DTaP vaccine are limited, both nationwide and in Massachusetts. Providers should continue to administer DTaP vaccine according to the usual schedule. If fewer doses become available, the MIP may have to issue interium guidelines for prioritization.

If you have any questions, please call the MDPH Immunization Program at 617-983-6800 or 888-658-2850.

Pneumococcal Vaccine (PPV23) Available Free for Adults at Risk

Pneumococcal disease kills 15,000 Americans every year. Despite the availability of free state-supplied PPV23, an estimated 300,000 Massachusetts residents 65 years of age or older have never received pneumococcal vaccine. Even worse, 64% of Massachusetts residents 18 – 64 years of age with a medical condition that puts them at risk for pneumococcal disease have never received the vaccine. Most people need only one dose of PPV23. For more information, call your Regional MDPH Office or the MDPH Vaccine Management Unit at (617) 983-6828.

College and University Health Center Survey Assessment

The Division of Sexually Transmitted Disease Prevention, MA Department of Public Health (MDPH), surveyed colleges and universities in Massachusetts to assess the extent of clinical and prevention/education services for sexually transmitted diseases (STD) in the spring of 2001. Sixty-seven of 89 institutions responded (14 state, 42 private and 11 community colleges).

Most respondents (91%) had a student health center on campus. Of these, 86% (53/61) offered services related to STDs. These services included diagnostic testing (83%), screening based on risk in the absence of symptoms (75%), one-on-one counseling for STDs, including HIV (94%), and STD treatment (74%). Most health centers indicated access to laboratory testing, either on-site or elsewhere. These services were most commonly available for chlamydia infection, herpes and gonorrhea. In contrast, ability to test for HIV antibodies was less available (47% of respondents). Health centers indicated that STD testing was performed primarily upon request by the student (87%).

The survey revealed that STD clinical services are available on most campuses. When services are not provided, students are referred to local physicians, health centers and STD clinics. However, other services relating to STD prevention were less available. Most schools rely exclusively on urging students to notify partners of possible exposure to an STD (up to 89%, depending on the STD). The highest reported rates for use of health department partner notification were for syphilis (30% of respondents) and gonorrhea (26% of respondents). In addition, most respondents stated that they do not report STDs to the Department of Public Health (65%).

Respondents to questions regarding prevention services (n=55) indicated a variety of educational activities related to STD. These included brochures (96%), one-on-one counseling in the health center (92%), posters (87%), health fairs (81%), lectures (75%), peer education (64%), messages in student newsletters (54%), orientation presentations (50%), information included within orientation packages (32%), and on web pages (32%). In addition, 96% of the student health centers provided free condoms.

Less than one-half (44%) of schools indicated they had a working relationship with their local health department or with a community organization. When asked how the Department of Public Health might assist schools change, expand or improve services, 90% (55/61) indicated a desire for more educational materials for students. Almost three quarters (72%) requested educational materials for staff, 64% asked for in-service education for the staff, and 54% asked for diagnostic and screening laboratory services. For more information, contact the MDPH Division of STD Prevention at (617) 983-6940.

Syphilis in Massachusetts 2001

In 2001, there were 107 cases of infectious syphilis reported in Massachusetts. This was a 23% decrease compared to 2000 (139 cases) and is only 10 more cases than the historic low of 97 cases reported in 1999. Even though there was a decrease in reported infectious syphilis cases, there was an increase in syphilis among men who have sex with men (MSM). Reported syphilis among MSM accounted for 25% of cases in 2000 and 49% of cases in 2001.

Sexual encounters arranged through the Internet contributed to the increase in syphilis among MSM. Additional risk factors identified included attendance at a bathhouse in Providence, R.I. and travel to other cities in the US. Health departments in San Francisco and New York collaborated on follow-up of contacts.

In the second half of 2001, an outbreak of infectious syphilis linked to Provincetown occurred. As of February 2002, there have been 13 cases. All were men who have sex with men. Meetings were held with the clinical and other staff at the Outer Cape Health Center in Provincetown to review appropriate screening and diagnostic work, assure communication, and develop prevention messages. Serology kits for syphilis testing were provided for case contacts who were unable to pay for the serologic tests. Staff of the Provincetown AIDS Support Group and the VNA of Cape Cod are providing outreach education and screening services. We are exploring further collaboration to promote prevention activities. Contact the MDPH Divsion of STD Prevention at (617) 983-6940 for more information.

Bioterrorism Perspective

The risk of infection with *Bacillus anthracis* remains low despite intense media coverage over the last several months. The public's sense of vulnerability to agents of bioterrorism reached an unprecedented high. In the weeks since October 4, 2001, the day the first anthrax case was reported in Florida, the MDPH has worked to alleviate fear and disseminate information. Measures have included increased 24-hour coverage by epidemiology and laboratory staff, more extensive on-line information, a new telephone hotline, communication to clinical providers regarding anthrax, and syndromic surveillance systems to provide early warnings of unusual disease occurrences. Over 3000 environmental specimens have been tested for anthrax in Massachusetts, and none have been positive.

Exposure to anthrax-contaminated mail is the only clear risk factor that has been identified so far for recent anthrax

continued on page five

You Be The Epi

You are the health agent in a Massachusetts town. Upon arriving at work one morning, you receive a phone call from the school nurse at the high school. She is asking for your advice about a suspicious white powder found on a desk in the school library. What should you do?

Your first step is to help assess the level of risk. While you do this, remain calm, and urge the nurse to remain calm. Remind her that there have been no cases of anthrax in Massachusetts. Of the more than 3,000+ environmental samples submitted to the State Laboratory Institute (SLI) for testing since October 2001, none have tested positive. It is very unlikely that this powder will test positive.

Assist the nurse in gathering and organizing information. What does the substance look like? Where was it found? Is there a common sense explanation? Might a janitor have spilled a cleaning agent, or a student spilled some food? Most importantly, is there any evidence of an expressed threat? Write down any information you get from the nurse, including a list of all those present at the scene and those who had contact with the powder.

Decide whether a 911 call should be made. If you or the school nurse have sufficient reason to believe that this powder represents a threat, **call 911**. Further management of the situation becomes a matter for law enforcement and the local fire department or HazMat (Hazardous Materials Response) team. The responding agency, which may be police, fire, or HazMat, will collect the sample and transport it to the SLI. Anyone who has touched the powder should wash their hands and any exposed skin thoroughly with soap and water. If the powder spilled onto clothes, there may be a need to collect and safely bag the soiled clothing. (Note: If you decide not to call 911, exposed skin should still be washed, and the desk may be cleaned appropriately.)

Provide reassurance to the public.

- People should be urged to be calm and be reminded that exposure to anthrax does not present an immediate threat of injury.
- Even if this specimen does test positive - a very unlikely event - anthrax is treatable with antibiotics.
- Results of anthrax tests on samples sent to the SLI are usually available 48 hours after the specimen is received. Prophylactic treatment with antibiotics is not recommended unless the sample tests positive, except in very high-risk circumstances. Medical providers, together with epidemiologists from the MDPH, can help make this determination.
- Remember, samples such as the one found in the school are considered low risk unless they were delivered by US or courier mail AND contained a threat.

Shortly after you finish speaking with the school nurse, calls begin coming in from reporters and concerned parents asking if the high school is going to be evacuated. What is your recommendation?

The decision to evacuate or quarantine a public building requires credible, or at least potential, evidence of a threat. In the case of a suspicious powder on a desk with no threat, evacuation is normally not recommended. However, a school principal, superintendent, or fire chief should make this decision in consultation with the local health agency and law enforcement officials.

Handling calls from the press can be the most stressful part of a local health officer's job and you should plan ahead. If your local community does not already have a designated press or public relations spokesperson for emergencies, you may want to consult with municipal police, fire and school officials as to who will serve as point person for press inquiries. If the school is evacuated, the local health department usually decides when to re-open it.

Risk assessment in these circumstances requires a balance between common sense and the need to take threats seriously. On the one hand, it would be a misuse of resources to test every white powder found across the Commonwealth, or every piece of mail that arrives with an unfamiliar return address. On the other hand, an increased index of suspicion is prudent. Risk assessment and response in these situations are areas of evolving development.

If the powder did test positive for anthrax, those at risk would need to be identified, contacted, treated and this would be performed in the context of a federal investigation and the national media spotlight.

The MDPH Division of Epidemiology and Immunization maintains an on-call system with trained epidemiologists available 24 hours a day at (617) 983- 6800 to provide consultation and assistance.

Bioterrorism Perspective continued from page four...

cases. MDPH has established guidelines, available at http://www.state.ma.us/dph/topics/bioterrorism/screenguide.pdf, to assist with assessing risk of exposure to an unknown powder. Suspicious materials will continue to be tested by the MDPH; however, submitters are encouraged to assess the level of risk by using the categories described in the guidelines. Epidemiologists can be reached by calling 617-983-6800 to discuss exposure situations and to assist in determining level of risk.

Refugee and Immigrant Health

African Refugees in Massachusetts

Refugee admissions from countries in Africa have increased significantly in recent years as the federal ceiling for this region has risen from 7,000 in 1997 to 22,000 in 2002. While admissions are consistently below this ceiling, the increase in proportion of all admissions, actual number, and diversity of African refugees are dramatic.

During the fifteen-year period 1986-2001, over 3,100 refugees from 23 countries in Africa resettled in Massachusetts. Most have come since 1992. Somalis represented the second significant wave of African refugee arrivals, following Ethiopians in the 1980's.

Many Somalis came to Massachusetts after spending years in refugee camps in Kenya. To increase access to public health services for these newcomers, the Refugee and Immigrant Health Program hired bilingual, bicultural community members to serve as outreach educators. The outreach educators have been key in linking the two very different cultures: that of the new arrival and that of the US health care system. Over time, staff have embraced two educational approaches. Home visits or group meetings to welcome and orient new arrivals have served to reduce the anxiety of resettlement and provide resources and education on accessing health care and understanding health issues. Workshops on cultural competency are conducted for health and social service providers. Very often, providers have been unfamiliar with the diversity and geography of Africa, as well as health beliefs, religious backgrounds and cultural practices.

In 2001, 84% of Africans arriving in Massachusetts were from Sudan (the largest national group), Somalia or Liberia, with lesser numbers from Sierra Leone, Ethiopia, and Congo. Applying the same approach as that taken with Somalis, bilingual, bicultural staff work to meet the needs of these newer communities. For some arrivals, such as those from Rwanda and Burundi, we are only able to meet their linguistic needs with staff who speak their second or third language, French. In other cases, we employ several staff persons to accommodate the diverse linguistic needs of a national group, for example, for Sudanese refugees, among whom numerous languages are spoken.

Refugee Admissions Update

Resettlement of refugees in the US, which was effectively shut down after September 11th, has slowly resumed, with new security measures in place. From October 2001 through January 2002, fewer than 3,000 refugees were admitted to the US, compared with over 16,000 during the same period last year. Among those waiting to enter the US are some 22,000 persons who have been approved as US refugees. Many wait in crowded refugee camps abroad.

The U.S. agencies responsible for admissions – the State Department and the Immigration and Naturalization Service – have pledged to come as close as possible to reaching the ceiling of 70,000 refugee admissions this year. In Massachusetts, as across the country, many who believe strongly in the refugee program and the role the US plays in assuring a future for refugees, are actively working to revitalize the US Refugee Resettlement Program.

African Refugee Community Health Initiative

In July 2001, the Refugee and Immigrant Health Program received funding from the federal Office of Refugee Resettlement to begin an African Refugee Community Health Initiative. Four African community agencies are funded through the initiative – African Initiative for Community Development, Somali Development Center, Somali Women and Children's Association, and Universal Human Rights International. These agencies have initiated projects that complement both the activities of the Refugee and Immigrant Health Program bilingual, bicultural community outreach educators and the BASICS program of the Massachusetts Office for Refugees and Immigrants.

The central goal of the health initiative is engaging newly arrived African refugees in community health education and dialogue. A variety of health topics will be addressed in a manner that responds to the experiences, cultures and languages of refugees from Africa. In this way, refugees can make more informed decisions about how and when to incorporate new health behaviors into their lives. Drawing on the experiences and voices of refugees, agency staff will also develop and offer health care provider workshops to increase their capacity to deliver responsive, appropriate care.

Time to Think About the 2002-03 Flu Season

As in previous years, state-supplied flu vaccine will not be sufficient to meet the demand for flu vaccine in Massachusetts. Health care providers should begin planning now for the next flu season by placing their orders for privately purchased vaccine as early as possible. The sooner the orders are placed, the better the price is likely to be.

To supplement the state-supplied flu vaccine they receive, cities and towns can purchase additional flu vaccine at the state-contracted price of $5.90/dose. This privately-purchased vaccine can be used at the discretion of the city or town, including to immunize municipal employees, but should not be distributed or sold. If you have not received information on how to order flu vaccine at the state-contracted price, call the MDPH Vaccine Management Unit at 617-983-6828.

Richard Riley continued from page one.....

Department of Environmental Health Sciences, Johns Hopkins University, and retired to Petersham, Mass. in 1977. Stimulated by tuberculosis outbreaks at a Chelsea office building and a Boston homeless shelter in the early 80's, Riley was contacted to help in planning and studying the use of ultraviolet germicidal light to prevent tuberculosis transmission – work continued until his death at age 90.

Prior to 1935, contact, including direct droplet spread, was considered the only route of contagion. This dogma was championed by the highly regarded health officer of Providence, Rhode Island, Charles Chapin, who wrote in his influential 1910 monograph: **"Sources and Modes of Infection"**

> "Bacteriology teaches that former ideas in regard to the manner in which diseases may be airborne are entirely erroneous; that most diseases are not likely to be dust-borne, and they are spray-borne for only 2 or3 feet,a phenomenon which after all resembles contact infection more than it does aerial infection as ordinarily understood"

In 1935, Wells challenged Chapin, arguing that measles was airborne and could be controlled with upper room ultraviolet irradiation. He demonstrated the efficacy of germicidal ultraviolet air disinfection in a field trial in day schools outside of Philadelphia where measles transmission was reduced. Still, in a 1946 official report, the American Public Health Association stated: "Conclusive evidence is not available at present that the airborne mode of transmission is predominant for any particular disease". This evidence was provided for tuberculosis by a definitive experiment designed by Wells near the end of his life, and carried out by Riley at the Baltimore Veterans Administration Hospital from 1958-1962. A 6-bed experimental tuberculosis ward was reconfigured so that the exhaust air was delivered to a penthouse where it was breathed by 150 guinea pigs in a special exposure chamber. The guinea pigs were skin tested for TB infection each month. The lungs of infected animals showed a single peripheral focus of tuberculosis, the result of inhaling a single infectious droplet nucleus. Since the only connection between the patients and the guinea pigs was air, the reality of airborne infection was established for tuberculosis. To be certain that all of the infection reached the guinea pigs through contaminated air from the ward, ultraviolet light was used in the ventilation ducts and this completely halted transmission.

Just the week before Riley's death, Dr. Edward Nardell, the state TB Control Officer at that time, for whom Dr. Riley was a friend, colleague and mentor, attended a meeting at CDC to plan the re-establishment of a Wells-Riley ward in a hospital in South Africa. In 2002, there is still no other way to quantitatively sample air for tuberculosis. The first goals of the new study will be to determine how long patients with multidrug-resistant TB remain infectious on therapy, and to evaluate the use of germicidal ultraviolet irradiation in developing countries.

In February of 2002, Dr. Edward Nardell left his position as state TB Control Officer after 18 years, to devote more time to international tuberculosis control in the Department of Social Medicine, Harvard Medical School and with Partners in Health. Dr. Nardell will be missed by the Department of Public Health, but will continue as a close colleague and valuable resource in the struggle against tuberculosis.

Southeast Regional TB Clinical Services Highlight

Southeast Tuberculosis Surveillance Area (TSA) 5
TSA Nurse: Joan Thompson-Allen, R.N., B.S.
Administrative Assistant: Kelly Letendre

In 2001, there were 41 verified cases of tuberculosis in the southeast region. The higher risk communities include Brockton, Quincy, and New Bedford. Six TB clinics are located in this region. This update will focus on the Brockton TB Clinic. This clinic does an excellent job of providing services to the diverse population in the greater Brockton area.

The Brockton TB Clinic moved from the outpatient department of Brockton Hospital to the white house in the front of the hospital. The new facility provides more space for patients and staff. Dr. William Stenson, and Dr. Devi Vedula provide medical services at the clinic. Stephanie Morin is the TB clinic manager, Donna Kenn is the administrator/coordinator, and Peg Doneghey provides secretarial services. Eddy Bien Aime and Leandro Fortes, outreach staff with the TB Division, translate and provide education and follow up for Haitian and Portuguese-speaking patients. Helen Singh coordinates TB services between the medical clinic and the Brockton Health Department and community.

TB Clinics are held weekly on Tuesdays from 9 am to 4 pm. Physician appointments are held in the morning and nurse visits are in the afternoon. The clinic is on the public transportation bus line. Visits are scheduled by appointment only.

Save the Dates for the Division of Tuberculosis Prevention and Control

Southeast Regional TB Conference

The conference will be held at the Heritage State Park Visitors Center on Thursday May 30th, 2002. Please contact Kelly Letendre in the southeast regional TB office at (508) 947-1231 for more information.

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Save The Dates

7th Annual MIAP Skills Building Conference

Worcester Holiday Inn, Worcester, MA. Thursday, May 16, 2002 from 8:00 am - 4:30 pm. For more information contact MIAP at (978) 524-0561, ext. 235 Fax: (978) 524-0913

6th Annual Public Health Nursing Conference

Anna Maria College, Paxton, MA. Wednesday, June 12, 2002 from 8:30 am - 4:00 pm. Sponsored by the Massachusetts Association of Public Health Nurses, Massachusetts Department of Public Health, Massachusetts Public Health Association. Contact (617) 524-6696 x104 for more information or to register.

Immunization Update 2002 Workshops

For dates, times and locations, contact your regional immunization office or the MDPH Vaccine Management Unit at (617) 983-6828.

Epidemiology and Prevention of Vaccine Preventable Diseases satellite course that was scheduled to begin in February has been canceled due to pressing work related to Smallpox activities. While we recognize this is one of our most popular NIP events, we appreciate your understanding as we shift resources to meet emerging needs. It will be offered again in 2003.

The 2002 NIP Satellite Course schedule is as follows:

June 27: Immunization Nursing Issues (New and 1st program in 2002!!!)
August 15: Immunization Update 2002
December 5: Surveillance of Vaccine-Preventable Diseases

Contact Walt Lasota at (617) 983-6834 for satellite course registration information.

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Howard K. Koh, MD, MPH, Commissioner of Public Health

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 10, No.3 Fall 2002

Immunization Exemptions and Vaccine Preventable Disease Exclusion Guidelines in School Settings

State law requiring proof of immunization for school entrance have played a crucial role in increasing vaccine coverage among the nation's children and protecting them from serious vaccine preventable disease. In fact, current school and child care immunization requirements have virtually eliminated outbreaks of vaccine preventable disease among children in our state.

The responsibility for identifying students in need of immunization to ensure that they obtain the immunizations required for school entry rests with school officials, often school nurses. In Massachusetts, there are only two situations in which children who are not appropriately immunized may be admitted to school: with medical or religious exemption.

A medical exemption results when a physician submits a statement or documentation that an immunization is medically contraindicated (e.g., for individuals who have anaphylactic reactions to vaccine constituents or who are immunocompromised). A physician's statement of medical exemption, without confidential medical information is succicient. A religious exemption is allowed if a parent or guardian submits a written statement that immunization conflicts with their sincere religious beliefs.

A recent survey found that many nurses in Massachusetts thought philosophical exemptions were acceptable. However, philosophical exemptions are **not** allowed by law in Massachusetts, even if signed by a physician. An example of an *invalid* exemption includes a written statement by parents that they refuse to vaccinate their child because immunizations are against their own personal or philosophical beliefs. Studies have shown that states with philosophical exemptions are more at risk for outbreaks of certain vaccine preventable diseases.

The law states that unimmunized children who do not meet criteria for medical or religious exemption, "shall

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HIV/AIDS Surveillance Program Overview

General Program Overview

The HIV/AIDS Surveillance program collects, analyzes and interprets data on cases on HIV infection and AIDS in Massachusetts in order to provide a comprehensive understanding of the HIV/AIDS epidemic in support of prevention and health services delivered by the Department of Public Health and health care and social service organizations statewide. HIV/AIDS surveillance data are disseminated widely to governmental agencies, public and private providers, advocacy groups and consumers. The program distributes specialized and routine data reports. Program epidemiologists also work collaboratively with planning and policy groups, health care providers and other Bureaus within the Department of Public Health. They provide surveillance information and assist with assessment of resource distribution and planning to ensure that the needs of people at-risk of or infected with HIV are met.

HIV/AIDS cases diagnosed among Massachusetts residents are reported directly to the program by health care providers. Data are then available for analysis and for the production of routine and specialized reports. Routine standardized reports are available on the program's website at www.state.ma.us/dph/cdc/aids/aidsprog.htm. Individuals may also request specialized analyses on specific populations and/or geographic areas of interest by contacting the program at (617) 983-6560.

Collaboration with other components of the Department of Public Health and community groups foster a better understanding of the various environments which HIV and AIDS service providers and programs function. Through collaboration, attention has been focused on segments of the population that have been heavily impacted by the epidemic, particularly injection drug users (IDUs), men who have sex with men (MSM), immigrants and refugees, women and people of color.

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Epidemiology

Frequently Asked Questions about Rabies Post-Exposure Prophylaxis

"I have bats in my house—do I need rabies shots?"

Bat bites or scratches may be very small or painless, so immunization or post-exposure rabies prophylaxis (PEP) should be considered after any physical contact with bats or when a bite, scratch, open wound or mucous membrane exposure can not be ruled out. Awakening to a bat in a room, or finding children (or others unable to give an accurate history) alone in a room with a bat, would warrant treatment of those individuals. If the exposing bat is available for testing, take care to use gloves or other precautions when capturing the bat.

Bat rabies is present in Massachusetts and rabid bats have been found in all parts of the state. Approximately 1% of bats in the wild and 10% of those tested at the Rabies Lab at the State Lab Institute have rabies virus infection.

"Which animal body fluids can contain the rabies virus?"

In a rabies-infected animal, the saliva and the tissues of the central nervous system (brain and spinal cord) may contain rabies virus. An animal's blood, urine, feces, or spray from a skunk do not contain the rabies virus and contact with these secretions does NOT constitute an exposure or require prophylaxis. However, if these secretions are, or may be, mixed with saliva, the exposure should be evaluated accordingly.

"Why is it safe to wait out a ten-day quarantine of a dog or cat before starting PEP?"

When an individual is bitten or scratched by an apparently healthy domestic pet (dog, cat, or ferret), and that animal is available for a ten-day quarantine, it is safe for the exposed human to wait out this quarantine period rather than immediately receive PEP. If the animal remains healthy for the duration of the ten-day quarantine period, research indicates that the animal was not shedding rabies virus at the time of the exposure and no treatment for rabies is indicated. There is adequate time to initiate PEP if the animal develops any signs consistent with rabies during the ten-day quarantine period.

If multiple or severe exposures occur to an individual's head or neck, it is necessary to evaluate whether treatment should begin before the 10-day quarantine ends or whether the animal should be killed and tested for rabies immediately.

Selected Massachusetts Communicable Diseases 2001 vs. 2000 Reported Cases

Disease	*2001*	*2000*
AIDS	769	704
Babesiosis	18	8
Campylobacter	1092	1158
Chlamydia	10423	10090
Cryptosporidiosis	55	37
E. coli O157:H7	113	165
Eastern Equine Encephalitis	1	1
Giardiasis	916	627
Gonorrhea	3269	2803
Hepatitis A	376	138
Hepatitis B (acute)	45	24
HIV Infection	493	599
Invasive Meningococcal Disease	52	67
Lyme Disease	1177	1154
Measles	3	0
Mumps	2	1
Pertussis	536	1361
Rubella	0	8
Congenital Rubella Syndrome	0	0
Salmonellosis (non-typhoid)	1331	1232
Shigellosis	208	280
Invasive Pneumococcal Disease (all ages)	341	337
Children <5 yrs.	72	101
Syphilis	428	406
TB	270	285
West Nile Encephalitis	3	0

The Four Day Grace Period

On February 8, 2002, the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAFP) published new General Recommendations on Immunization (MMWR 2002; 51 [No. RR-2]:1-35). Included in this publication are new guidelines for what to do if an immunization is administered before the recommended minimum age or interval.

What is the 4-day grace period?
The ACIP now recommends that vaccine doses administered ≤ 4 days before the minimum interval or age be counted as valid. Doses administered ≥ 5 days before the minimum interval or age are considered invalid. The 4-day grace period also applies to MMR and varicella vaccines given before the 1st birthday. The 4-day grace period does **not** apply to live vaccines administered < 28 days apart, or to rabies vaccine given off-schedule, because data show immunogenicity is reduced in these situations.

Some examples of valid doses include: 1) MMR vaccine administered 3 days before the 1st birthday; and 2) Hep B-2 administered 26 days after hep B-1. These doses would not need to be repeated.

Some examples of invalid doses include: 1) Varicella vaccine administered 5 days before the 1st birthday; 2) Hep B-2 administered 21 days after hep B-1; 3) MMR administered 26 days after varicella vaccine; and 4) MMR-2 administered 27 days after MMR-1. These doses would need to be repeated. To determine when to give the next dose, use the pertinent minimum interval or age, and count from the last *invalid* dose.

How will the 4-day grace period be used?
In clinical practice, the grace period should be used as the last resort. The recommended age and interval are always preferred, and the minimum interval can be used to catch patients up. The grace period should **not** be used to schedule future appointments, but can be used if a patient is not up-to-date and is already in the office, in order to catch them up and to avoid missed opportunities for immunization.

Retrospectively, the 4-day grace period can be used to assess doses administered in the past to determine whether or not they are valid. It is now recommended that school nurses use the 4-day grace period when evaluating a school child's vaccination record to determine if it satisfies school entry requirements.

Use of the 4-Day Grace Period
To schedule a future appointment: **NO!**
When evaluating a vaccination record: **YES!**
Client is in the office or clinic early: **MAYBE!**

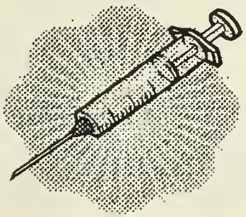
Vaccine Supplies Improving

Several vaccine manufacturers have now increased production to meet demand for most of the childhood vaccines. However, there continues to be a shortage of pneumococcal conjugate vaccine (PCV7), and the Advisory Committee on Immunization Practices (ACIP) interim guidelines remain in place. Although the shortages of DTaP, Td, and MMR never affected provider practices in Massachusetts, they did have an impact in many other states. However, sufficient supplies of these vaccines are now available in all states.

Wyeth-Lederle is attempting to meet the demand for PCV7. In Massachusetts, we are currently operating under the *moderate shortage* protocol. This means suspending the fourth dose in the series for all healthy children until further notice. The shortage of PCV7 is anticipated through the end of 2002. Please remember that all individuals whose vaccine is delayed must be placed on recall lists.

Merck has filled all of the back orders for varicella vaccine and the ACIP has now recommended a return to the normal infant immunization schedule of a dose at 12 to 18 months of age (CDC. MMWR 2002;51:679).

The Massachusetts Department of Public Health Immunization Program appreciates your cooperation during these shortages and will continue to inform you of any changes to the current recommendations. If you have questions, please contact the Vaccine Management Unit at 617-983-6828.



Hepatitis C Educational Materials

MDPH has developed a number of hepatitis C educational materials for free for providers, patients and people at-risk for infection. These include:

Pamphlets for the general public
Fact sheets
A brochure for nurses
Fact cards for injection drug users
A video and booklet for recently diagnosed patients

Many of the materials are available in Spanish and other languages. Please visit our Hepatitis C Website at www.masshepc.org or call 617-983-6800 for more information.

STD

Preventing STDs Among Men Who Have Sex With Men

There has been an increase in the number of reported STDs and other indications of risk behavior among men who have sex with men (MSM) over the past few years. To understand and address this evolving situation, the Division of STD Prevention (DSTDP) has intensified collaboration with colleagues in the HIV/AIDS Bureau of MDPH, and the STD and AIDS programs of the Rhode Island Department of Health (RIDOH), as well as with community-based organizations (CBOs) in Massachusetts and Rhode Island. Dedicated STD clinical services have been re-established in Hyannis and Provincetown on Cape Cod. The VNA of Cape Cod is now offering serologic tests for syphilis in their monthly public clinics held in Provincetown, Dennis and Hyannis. The Provincetown AIDS Support Group (PASG) is including STD prevention messages in its varied outreach activities on the Cape.

Work with RIDOH and the CBOs in Rhode Island, southeastern Massachusetts, and the Boston area is focused on collaborating with MSM-oriented businesses to promote risk-reduction messages and health education. Two members of the DSTDP staff attended the first meeting of New York City's Syphilis Elimination Advisory Group and returned with many ideas as to how such a group can serve prevention planning and programming especially for MSM. Plans for a Massachusetts Syphilis Elimination Advisory Group are moving forward. It should be convened within the next few months.

New Priority Case Designations for STD Prevention

Some reported sexually transmitted diseases are designated as "priority" cases. A priority case requires disease intervention services (an interview with a Disease Intervention Specialist) to enhance the risk-reduction counseling and education provided in the clinic, as well as to attempt to identify, locate and inform partners of their possible exposure. Currently, the Division of STD Prevention (DSTDP) designates infectious syphilis, men diagnosed with gonorrhea in an STD clinic, and HIV infection as priority cases. This has been the division policy for many years.

Epidemiologic patterns change and the DSTDP has found it necessary to expand the roster of priority diseases to include all cases of rectal gonorrhea and neonatal herpes. Rectal gonorrhea is an indicator of unprotected anal intercourse, which is of significance in HIV transmission, as well as for transmission of other STD. Interviews with women who give birth to children with neonatal herpes should help identify risk factors and missed opportunities in reproductive health, as well as in STD care services. Under consideration for future inclusion among priority cases are all cases of chlamydia diagnosed in publicly-funded STD clinics, as well STDs diagnosed in women who are pregnant.

HIV/AIDS Surveillance

Continued from page one

HIV Surveillance System Overview

AIDS has been reportable in Massachusetts since 1983. Massachusetts has had HIV infection reporting since January 1, 1999. In Massachusetts, HIV is not reportable by name but by non-name code. Health care staff generate non-name codes from elements of the name and other readily available data. The case code consists of the first two letters of the first name, number of letters in the last name, gender, date of birth, last four digits of the social security number (a randomly generated number) and zip code of current residence. Reporting of newly diagnosed infections, as well as prevalent/existing cases is required. Information reported includes the case code, demographics, risk history, laboratory data, and treatment and referral information. In addition to provider reporting, laboratories performing HIV tests provide the program with information regarding HIV-positive test results. The program is then able to link positive test results reported by laboratories with the provider who had requested the test (but not the patient) so that follow-up can be conducted to ensure the case is reported with all necessary information.

The surveillance system has been a success. There has been a high level of provider reporting. The non-name code is complete in over 99% of the case report forms received. Evaluation activities have shown the system to be in compliance with CDC established performance standards for HIV surveillance systems. Completeness of reporting was shown to be 85% and 86% when compared with statewide drug assistance program and statewide primary care program databases. Seventy-seven percent of HIV cases reported in 1999 and 79% of HIV cases reported in 2000 were reported within six months of diagnosis. An analysis conducted under the guidance of CDC demonstrated the sensitivity and specificity of the non-name code to be 94% and 98% respectively. Finally, risk factors have been successfully ascertained in 84% of HIV cases reported.

You Be The Epi

Breakthrough Varicella Disease

The director of a daycare center calls the Division of Epidemiology and Immunization to report there have been a number of children with chickenpox in her center. Several of the sick children had been vaccinated for varicella. She has been hearing concerns from parents that the vaccine is not effective and she is looking for guidance on the matter. What can be done?

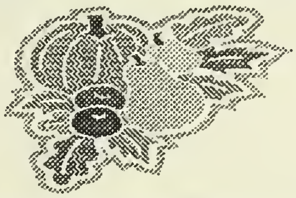
Up to 20% (and perhaps higher) of vaccinated children upon exposure to the varicella virus will develop breakthrough disease. Breakthrough disease usually appears as a generalized maculopapular rash with few vesicles, and usually less than 50 lesions. The child is often afebrile and many are minimally symptomatic. Therefore, it is important to determine the severity of disease in vaccinated children to ascertain if it is vaccine failure or breakthrough disease. Secondly, if the number of cases in vaccinated children seems unusually high, the vaccine effectiveness can be calculated. The following information should be obtained for this purpose:

1. First, confirm that the children have chickenpox and not another rash illness (e.g., a physician's diagnosis or a positive direct fluorescent antibody (DFA) or polymerase chain reaction (PCR) result for varicella)
2. Determine the number of children enrolled at the center
3. Determine who is vaccinated against varicella, has a past history of disease or is susceptible (either due to young age or medical/religious exemptions)
4. Identify who has chickenpox and the severity of disease based on the number of lesions (< 50 lesions is considered mild, 50-499 lesions is moderate and $\geq$500 is severe).

The attack rates for the vaccinated and unvaccinated children are determined, and then the vaccine effectiveness can be calculated by using the following formula:

$$\text{Vaccine effectiveness} = \frac{\text{(attack rate in unvaccinated) - (attack rate in vaccinated)}}{\text{(attack rate in unvaccinated)}} \times 100$$

In our example, the director was able to provide the following information: there were 65 children in the facility, 52 of whom were vaccinated and 7 with a history of disease, leaving 6 susceptible. There were 12 cases of varicella, of which 7 were vaccinated (all considered mild, based on the number of lesions and none had a prior history of disease). Using this data, the attack rates are calculated: for vaccinated children, it is 7/52=0.135 and for unvaccinated children, it is 5/6=0.833 (those with a past history of disease are excluded from the calculations). Inserting these two numbers into the formula above, the vaccine effectiveness is calculated to be 83.8 %, which is within the expected range. Additionally, while some of the vaccinated children did come down with chickenpox, all cases were mild and are considered breakthrough disease. Therefore, the director of the center can reassure parents that the vaccine is working as expected, and therefore, children should continue to be vaccinated against varicella.



Immunization Exemptions

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not be admitted to school" (MGL c76, ss 15 and 15c, 105 CMR 220.000). However, the policies for exclusion of unimmunized or partially immunized children are developed by individual schools or school districts and are enforced at the local level. The one exception for exclusion of unimmunized or partially immunized children is in the case of homeless children, who cannot be denied entry to school if they do not have their immunization records (please refer to the *News Briefs* section for more information).

Persons who claim exemptions from immunization for any reason are at increased risk of contracting a vaccine preventable disease. Therefore, in situations when one or more cases of a vaccine preventable disease are present in a school, all susceptibles, including those with medical or religious exemptions, are subject to exclusion from school (105 CMR 300.000). These exclusion policies have been put into place in order to protect unimmunized, susceptible students, to protect others who may have had vaccine failure, and to prevent further spread of vaccine preventable disease.

Children who are unimmunized are not only at risk themselves, but pose a danger of transmission of infection to other children who cannot be effectively immunized because they are too young or because they have medical conditions that lead to vaccines not providing adequate protection. Due to medical advances, the number of children in treatment for leukemia, receiving organ and bone marrow transplants, and taking medications or having other conditions that weaken their immune systems is growing. In order to be protected, these vulnerable children must rely on the community to protect them from disease exposure through community-wide vaccination.

Through strict enforcement of immunization regulations and evaluating vaccination coverage among students, children in Massachusetts will continue to be protected against vaccine preventable diseases.

Refugee and Immigrant Health

Addressing Needs of HIV-Positive Refugees

Approximately 2,000 to 2,500 refugees resettle in Massachusetts each year. Resettlement of refugees who are HIV-infected presents challenges and opportunities to those working in resettlement, public health and HIV services. Information sharing and linkages among these groups have benefited all involved.

In recent years, HIV-positive refugees who have been resettled in the Boston area, have been evaluated at the Diagnostic Evaluation Unit, Boston Medical Center, most within one week of entering the U.S. One-third of adult HIV-infected refugees were diagnosed with AIDS during the initial assessment. Among those for whom antiretroviral therapy was recommended, nearly 90% achieved viral suppression when tested at three months.

From the perspective of the Refugee and Immigrant Health Program (RIHP), some of the issues that surface for a refugee with HIV/AIDS are similar to those among recently arrived persons diagnosed with active tuberculosis. There are fears regarding contagiousness, stigma, confidentiality, the routine of taking multiple medications daily, and side effects. Given these parallels, the program has applied the existing model of health outreach for tuberculosis to newly arrived refugees with HIV infection:

1. Trained bilingual and bicultural community outreach educators (COE) are assigned individual clients based on community served. Resettlement agency case managers incorporate information on RIHP staff and their role in follow-up into their broader 'new arrival orientation.'
2. COEs interpret in clinical sessions and work in collaboration with the refugee's medical team. Being in the initial sessions facilitates coordination of appointments and health education during home visits. As refugees develop trust in the system, hospital interpreters are increasingly used.
3. Serving as the 'bridge between provider and community,' COEs often assist the client in contacting her/his provider, whether it is related to medications and side effects, symptoms, or in understanding why and what a provider is recommending.

Drawing on three years of experience, RIHP staff have shared some points to consider in the care of newly arrived HIV-positive refugees. These include:

- Providers often underestimate the amount of support newly arrived refugees need, both from resettlement staff and from health care providers.

The magnitude of stress that accompanies the initial phase of resettlement is often minimized by providers. Basic language and transportation barriers, economic and housing problems, shock, disappointment and anxiety that comes from wondering how one will be able to survive here are challenges for all refugees. These are exacerbated by the stress of facing and coping with a diagnosis of HIV/AIDS.

- Refugees voice significant concerns around provider and hospital/clinic staff maintaining confidentiality regarding their HIV status, especially in small, close-knit communities.

The stigma of an AIDS diagnosis is severe enough that ostracism from one's community has occurred when people have disclosed status or information has been inappropriately shared. Word spreads easily when communities are small and fairly new to the US. Family members have 'disowned' individuals. Some Refugees have claimed that 'Everyone in my community knows my status.' Bilingual staff have had to 'earn' trust and are periodically tested to see if information has been shared with other members of the community.

- Initial reactions to a diagnosis of HIV/AIDS have ranged from denial to hopelessness to high expectations of being given medications, even when treatment is not indicated.

Several refugees do not recall having ever been informed of their status when tested overseas and are shocked when they receive the diagnosis upon arrival. To many, the concept of continuous care for HIV/AIDS is new, as is monitoring CD4 counts or viral loads or waiting for the right time to take medications. COEs play a key role in explaining HIV/AIDS care in the U.S., especially if there are gaps in cultural understanding between provider and client. Initially and often through the early phases of resettlement, a COE is the only person in the community that a refugee talks with about what s/he is going through.

- After three years of follow-up, almost all refugees have maintained a high level of adherence to medications, to appointments, and to basic risk reduction practices.

COEs have found motivation and increasing self-reliance among refugees. Ongoing concerns include substance abuse, limited English skills, lack of affordable housing, financial stability and isolation and stigmatization.

Genotyping of *Mycobacterium tuberculosis* in Massachusetts: Results of a 5-year study

In 1996, the Centers for Disease Control and Prevention established the National TB Genotyping and Surveillance Network (NTGSN) to evaluate the use of a "DNA fingerprinting" technique called restriction fragment length polymorphism (RFLP) typing in tuberculosis control. Massachusetts was one of 7 sites in the country selected to be part of the network. The study is now concluded, and results will be published in an upcoming issue of the Journal of Emerging Infectious Diseases.

Between July 1, 1996 and December 31, 2000, 1032 culture positive patients were enrolled in the study. Of those, 984 (95%) could be assigned a DNA fingerprint type by the regional genotyping laboratory at the New York State Department of Health Wadsworth Center in Albany, NY. *Mycobacterium tuberculosis* (MTB) cultures from 712 patients had unique genotypes, while 272 (28%) shared the same genotype (clustered) with other cases. This percentage was considerably lower than in the NTGSN overall. For the entire NTGSN, of 10,752 patients enrolled, 5171 were considered clusters (48%). It is believed that when cases cluster, patients have the same strain of MTB, and it is possible that transmission has occurred between them. If patients do not cluster, transmission is not likely. In addition, because the genotype changes over time, clustering also is believed to imply recent transmission. Risk factors and demographics associated with clustering in Massachusetts included being US-born, history of homelessness within the past year and excessive alcohol use or drug use. Interestingly, patients with drug-resistant MTB were significantly less likely to be in genotype clusters.

In addition to 104 epidemiologic links detected by conventional contact investigation (CI), we were able to identify 14 cases of potential transmission undetected by conventional CI methods (12% of total) during epidemiologic investigation of genotype clusters ("cluster investigation"). Cluster investigations consisted of standardized medical record reviews at every place a patient was seen for his or her TB disease, and standardized patient interviews with cases or proxies (if the case was unable to be interviewed). The majority of these newly discovered epidemiologic links (8/14) were determined to be in social settings.

These findings suggest several things. The fact that almost ¾ of TB cases in Massachusetts have unique genotypes suggests that most cases are due to reactivation of old infection rather than new infection, and that greater resources should be directed toward treatment of latent TB infection. The low likelihood of transmission of MTB, in general, and drug-resistant MTB, in particular, suggests that current prevention and control efforts are effective and should be maintained. The finding of transmission occurring in social settings also suggests that social networks should be investigated more fully.

This project was a collaborative effort of the Division of TB Prevention and Control, the Mycobacteriology Laboratory at the Massachusetts State Laboratory Institute, the Wadsworth Center of the New York State Department of Health, as well as, the CDC; and was made possible by the work of the public health nurses of the local boards of health, the Boston Public Health Commission Tuberculosis Control Program and the staff of homeless shelters in the Commonwealth.

Metro West Regional Clinical Services Highlight

Tuberculosis Surveillance Area (TSA) 2

TSA Nurse: Carolyn Harris, RN, B.S.N.
Administrative Assistant: Debra Thimas
Outreach Educator: Dipak Desai

In 2001 there were 50 verified cases of tuberculosis in the Metro West region. The higher risk communities include Chelsea, Cambridge, Framingham, Revere, Somerville and Waltham. The TB Division funds four TB clinics in the Metro West region.

New Staff Update

We would like to update you on staff changes in the Patient Management Unit of the TB Division. Cecilia Kremer has been hired as the new Contact Program Manager/Epidemiologist, replacing Susan Logan. Cecilia is responsible for coordinating all the activities of the Contact Project, including follow-up on-all contacts to infectious TB cases. Prior to this position, Cecilia worked as a research assistant on several projects within the TB Division.

The Division was recently awarded a grant from the Centers for Disease Control to conduct a prospective project targeted to improving contact investigations. Edward Pomfred, RN, has been hired as the Project Manager and Ayaan Gedi as the epidemiologist for the project. The staff has conducted an in-depth data analysis of contact investigations performed over two years to identify strengths and weaknesses of contact follow-up. Based on this analysis, the project has identified the contact evaluation process (first and second tuberculin skin tests and medical evaluation with chest radiographs) as the focus for the project. The next steps are to identify five project sites and to develop and implement interventions to help improve contact follow-up. Five part-time outreach educators will be hired, one for each project site.

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Save The Dates

The Emergency Management Conference: To be held at the Worcester Centrum Center on Nov. 19-21, 2002. Public health topics will comprise 1/3 of the conference, CEUs available. Registration fees are $175. For information about the conference please call Katy Bellemare at 508-820-2014.

Western Regional TB Conference: The conference will be held on November 21, 2002. For more information please contact Evelyn Thomas at the regional TB office at (413) 586-7525.

Surveillance of Vaccine-Preventable Diseases: This satellite video conference will be held on December 5, 2002, from Noon to 3:30 PM. Registration, by participants and course evaluation/testing or CMEs or Nursing CEUs certificates will be done On-Line either by going to:
For CDC & NIP courses: http://www.phppo.cdc.gov/phtnonline/ or http://www.cdc.gov/nip/ed/#Calendar
For CMS (formerly HCFA) courses, go to register and obtain course details: http://cms.internetstreaming.com
Also, always check: http://www.state.ma.us/dph/cdc/epii/imm/events/2002ImmSatelliteCourses.htm for the latest updates on statewide viewing sites! Also, you can contact Walt Lasota at (617) 983-6834, or through email at: Walter.Lasota@state.ma.us

State & Local Pandemic Planning Committee Meetings: November 13, 2002 at the Shrewsbury Board of Health from 10:00 am to 11:30 am. January 19, 2003 at the State Laboratory Institute from 10:00 am to 11:30 am. For more information on either date, contact Donna Lazorik, Massachusetts Department of Public Health Immunization Program, at (617) 983-6800.

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 11, No.1 Winter 2003

Vaccines are Good, Disease is Bad

As parental concerns about vaccine- preventable diseases and their complications have waned, questions and misconceptions about vaccine safety have increased. This was highlighted by a recent national survey by Gellin et al.[1], which found that although the majority of parents supported immunization, 25% believed that too many vaccinations could weaken the immune system and 23% believed that children get too many immunizations.

Vaccine Benefits Outweigh Risks

The question on the minds of many parents when faced with vaccinating their children is "Are vaccines safe?" If you define "safe" as being free from any possible negative effects, then the answer is no. Vaccines, as do all medicines, carry some degree of risk and possible side effects. Although most side effects are mild, such as local reactions, in rare instances some are more severe. The more important question should be, "Do the benefits of getting the vaccine (avoiding disease) outweigh the risks (side effects)?"

For example, let's look at the original, whole cell pertussis vaccine. During the 1970s, widespread concerns about the safety of the whole cell pertussis vaccine led to a rapid fall in immunization levels in the United Kingdom. More than 100,000 cases and 36 deaths due to pertussis were reported during an epidemic in the mid 1970s. Although the side effects of the original pertussis vaccine could be relatively severe, no child has died from the vaccine, though many died from pertussis.

Vaccines and the Infant Immune System

Do children receive too many vaccines? A recently published review by Offit et al.[2] found that, while babies are receiving more vaccines than in the past, they are in fact receiving fewer antigens (125 today compared to 3,000 in 1980) due to the "purified" content of modern vaccines. In addition, Offit et al. report that infant's immune systems are capable of responding to as many as 1 billion to 100 billion different antigens.

Vaccines, Autism and Other Diseases

But what about the reports that vaccines cause autism, diabetes, sudden infant death syndrome (SIDS), or multiple sclerosis? Reports have suggested a link between vaccination and disease because of the timing involved with receipt of vaccine and disease onset. If one event precedes another, it does not

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Listeriosis

Listeriosis is a potentially serious infection caused by eating food contaminated with bacteria called *Listeria monocytogenes*. The extent of food contamination with *L. monocytogenes* has been increasingly recognized in the United States. The disease is most dangerous to pregnant women, newborns, the elderly, and persons with weakened immune systems. According to the Centers for Disease Control and Prevention (CDC), there are an estimated 2,500 cases of listeriosis each year in the U.S. Of these, 500 die. Pregnant women are about 20 times more likely than other healthy adults to get listeriosis. About one-third of listeriosis cases occur during pregnancy. In pregnant women, spontaneous abortion, stillbirth, or birth of a severely ill baby can occur as a result of infection of the fetus. Healthy adults and children occasionally become infected with *L. monocytogenes*, but they rarely become seriously ill.

L. monocytogenes can be found in soil and water. In addition, wild and domestic animals can harbor these bacteria. *L. monocytogenes* has been found in a variety of raw foods, such as uncooked meats and vegetables, as well as in processed foods that become contaminated during or after processing, such as soft cheeses and cold cuts. Unpasteurized (raw) milk or foods made from unpasteurized milk may contain *L. monocytogenes*. These bacteria are killed by pasteurization, and heating procedures used to prepare ready-to-eat processed meats should kill the bacteria. However, sometimes contamination can occur after processing.

In recent years there have been a number of food product recalls due to contamination by *L. monocytogenes*. These recalls have involved specific dairy and prepared meat products, including many different varieties of hot dogs and cold cuts. Currently under investigation is a large, multi-state outbreak with cases dating back to July 2002. There are 53 culture-confirmed cases in this outbreak, including 8 deaths and 3 stillbirths or miscarriages. The cases are from New York, Pennsylvania, New Jersey, Delaware, Maryland, Connecticut, Michigan, and Massachusetts. These cases were linked through pulsed-field gel electrophoresis (PFGE), a DNA-fingerprinting technique performed at state laboratories in the U.S (for more information on PFGE, see

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Invasive Meningococcal Disease—When to Administer Post-Exposure Prophylaxis (PEP)

Each year, 50-100 cases of invasive meningococcal disease are reported to the Massachusetts Department of Public Health (MDPH). Cases of invasive meningococcal disease are seasonal, with the majority of cases occurring in the winter and early spring.

A confirmed case of invasive meningococcal disease is defined as isolation of *Neisseria meningitidis* from a sterile site. It is important to remember that a sputum specimen positive for *N. meningitidis* does not indicate invasive disease and should not result in the administration of PEP to close contacts. Also, contacts of cases with viral meningitis or meningitis from causes other than *N. meningitidis* do not need to receive PEP.

When a case is identified, close contacts should be identified as soon as possible and receive appropriate antibiotic therapy. Close contacts include all household members and those individuals who have had intimate contact with the case's oral secretions (especially saliva). Close contact with these secretions can occur through kissing or through sharing food or eating and drinking utensils. Other types of activities to be considered include sharing lip gloss and cigarettes, water bottles, toys among infants and toddlers and shared office space, car pools, or other shared, enclosed spaces. When evaluating potential non-household contacts of a case, it is important to remember to ask about attendance at school, daycare, after-school programs and parties. Other potential contacts include baby sitters, close friends, relatives, visitors and work contacts.

All confirmed and suspect cases of invasive meningococcal disease should be reported immediately to the MDPH epidemiologist on-call at (617) 983-6800 during normal business hours or (617) 983-6200 during nights and weekends. The epidemiologist on-call will assist in evaluating potential exposures.

BT Workgroup InformationAvailable On The Web!

The Bureau of Communicable Disease Control shares responsibility for coordinating the workgroups of the statewide Emergency Preparedness and Response Program Advisory Committee. For a full listing of the workgroups, information about how you can get involved, a calendar of upcoming meetings, and minutes from past meetings, please go to the web site at: http://www.state.ma.us/dph/bioterrorism/advisorygrps/.

The *Guide to Surveillance and Reporting* is available online at www.state.ma.us/dph/cdc/gsrman/gsr.htm

Listeriosis - continued from page one

www.cdc.gov/pulsenet). In addition, one intact food product and 25 environmental specimens from a poultry processing plant yielded *L. monocytogenes*. The isolate from the food product had a different PFGE pattern; however, two environmental samples from floor drains shared an indistinguishable PFGE pattern with that of organisms isolated from the outbreak cases, suggesting that the plant may be the source of the outbreak. In response, the manufacturer has recalled 27.4 million pounds of fresh and frozen ready-to-eat turkey and chicken products (for more information on this recall, see http://www.fsis.usda.gov/oa/recalls/prelease/pr090-2002products.htm).

The following steps can be taken to prevent listeriosis and other foodborne illnesses:

- Thoroughly cook all raw meats.
- Wash raw vegetables thoroughly before eating.
- Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.
- Wash hands, knives, and cutting boards after handling uncooked meats and dairy products.
- Avoid raw (unpasteurized) milk or foods made from raw milk.
- Always thaw ready-to-eat frozen food in the refrigerator or microwave, not on a counter.
- Thoroughly reheat food until steaming hot.

Additional recommendations for persons at high risk, such as pregnant women and persons with weakened immune systems, include:

- Avoid soft cheeses, such as feta, Brie, Camembert, blue-veined, and Mexican-style cheeses. Hard cheeses, processed cheeses, cream cheese, cottage cheese, and yogurt need not be avoided.
- Cook hot dogs until steaming hot before eating.

Although the risk of getting listeriosis from cold cuts and other foods from deli counters is relatively low, pregnant women and immunosuppressed persons may choose to avoid these foods or thoroughly heat them before eating. For further information regarding listeriosis, visit the CDC website at www.cdc.gov.

Medicare Reimbursement for State-Supplied Vaccine

The budget crisis and the increasing cost of influenza vaccine have resulted in the Massachusetts Department of Public Health (MDPH) decreasing the amount of flu vaccine it distributed for the 2002-03 flu season. In order to ensure the continuation and expansion of the adult vaccine program in Massachusetts, MDPH is working with the UMass Medical School Center for Health Care Financing to explore options for improving reimbursement for influenza vaccine. An important potential source of revenue is Medicare. Medicare reimburses for the cost of administering influenza and pneumococcal vaccine to Medicare beneficiaries, as well as for the cost of the vaccine itself.

Many local health departments and VNAs already participate in Medicare roster billing for the cost of administering state-supplied influenza and pneumococcal vaccine to Medicare beneficiaries in their clinics. This can be an important source of revenue for these agencies. For example, Joanne Martel, RN, Assistant Health Director/Public Health Nurse for the Andover Department of Community Development and Planning, estimates that 60% of the approximately 1,500 people she sees in her clinics are Medicare beneficiaries. Joanne reports that last year Andover received approximately $4,500 in reimbursement for the administration of state-supplied flu and pneumococcal vaccine to Medicare beneficiaries in her town.

The Commonwealth proposes submitting copies of the same rosters to Medicare for reimbursement for the cost of the vaccine. Instructions on submitting copies of billing documents to MDPH will be forthcoming. MDPH encourages all facilities and institutions that receive state-supplied vaccine to enroll in the Medicare roster-billing program. For information on Medicare reimbursement, visit their website at http://www.cms.hhs.gov/preventiveservices/2.asp#1, or contact Roberta Tulley, Medicare Customer Service, at 207-294-6013.

Current Medicare Reimbursement Rates:

For Influenza Vaccine: $8.02 per dose

For administration of influenza and pneumococcal vaccine:

Middlesex, Suffolk and Norfolk counties:	$4.77/dose
Remaining Massachusetts counties:	$4.37/dose

MIIS Immunization Registry Update

The Division of Epidemiology and Immunization staff members Marcia Izzi, Steven Levy and Dennis Michaud attended the Centers for Disease Control and Prevention 3rd annual Immunization Registry Conference in Philadelphia during October. The conference brought together over 400 local, state, federal and private sector immunization registry partners, to promote knowledge and information about the development and use of immunization registries.

The theme of the conference was "Grow/Connect/Protect". The goal was to provide a forum to share and exchange programmatic, technical and scientific information and to build support for registries. Presentation topics included provider recruitment strategies, registry marketing techniques, operating registry systems and the use of registries for smallpox administration, adverse event tracking, and vaccine distribution.

Vaccines Are Good, Disease Is Bad

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necessarily mean that the first event caused the second. To determine if there is a link between vaccine and disease, you must compare incidence of disease in vaccinated versus unvaccinated populations.

Federal government agencies have taken the lead with many vaccine safety research initiatives. One example is that the Institute of Medicine's Immunization Safety Review Committee has published a number of reports on different vaccine safety issues (www.iom.edu). These reports have shown that the currently available data do not support a link between vaccines and the variety of diseases for which they are believed to cause weakening of the immune system.

Currently there is a wealth of information confirming the fact that the benefit of vaccines outweighs the risk of the vaccine side effects and that we should continue in our goal of keeping immunization rates high in Massachusetts. For more information concerning vaccine safety, visit these websites (www.cdc.gov/nip and www.chop.edu).

[1] Gellin, B.G., et al. Pediatrics. 2000;106: 1097-1102

[2] Offit, P.A., et al. Pediatrics. 2002;109: 124-129

HIV/AIDS Surveillance

Update On Mortality Among AIDS Cases In Massachusetts

Since the mid 1990s, there has been a dramatic decline in deaths among people reported with AIDS. The introduction of highly active antiretroviral therapy (HAART) in 1996 had a substantial impact on the survival time of persons with HIV infection and AIDS. Decreases in deaths among persons with HIV infection and AIDS are evident in all demographic groups in Massachusetts. However, differences in the natural historyof HIV disease in various populations and the evidence of comorbidity, such as hepatitis C, play a role in differential mortality trends among subgroups.

Declines in deaths also reflect declines in AIDS incidence in different populations. The number of deaths in persons with AIDS increased each year from the beginning of the epidemic until 1995, reflecting the increase in the incidence of AIDS through the 1980s and early 1990s. However, declines in the number of deaths in 1996 and 1997 were considerably greater than expected based on incidence trends. As of November 2002, 17,626 persons with AIDS were reported among residents of Massachusetts, and 9,932 have died.

There has been a proported decrease in deaths among whites diagnosed with AIDS and increases among blacks and Hispanics. There has been a sustained increase in the proportion of deaths occuring among those with injection drug use (IDU) as a reported risk for HIV infection and a decrease among men who have sex with men (MSM). These trends in mortality mirror AIDS incidence.

Deaths among people with AIDS in Massachusetts peaked at 1,206 in 1994, dropping to 332 in 2001, a decrease of 73%. From 1995 (the peak year for deaths among females at 232) to 1998, deaths among females with AIDS decreased by 70% (232 to 69, annually). However, deaths among females increased to 76 in 1999, 79 in 2000 and 94 in 2001. Deaths among males with AIDS peaked at 975 in 1994 and decreased by 76% to 238 in 2001.

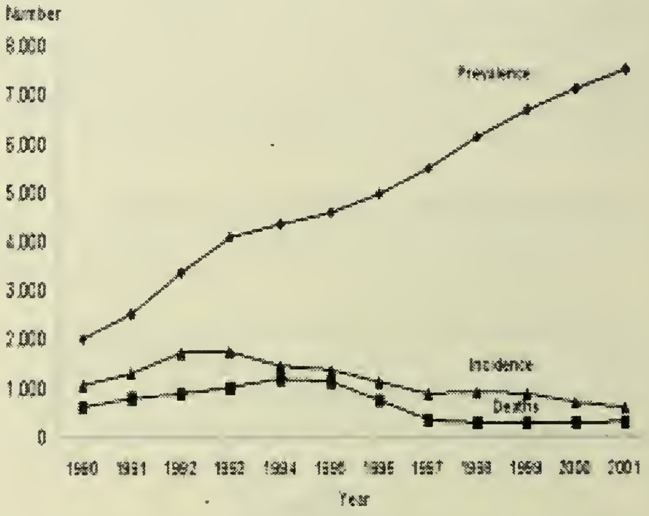
Over time, people of color have accounted for an increasing proportion of deaths among people with AIDS. In 1991, whites accounted for 69% of deaths among people with AIDS and 31% for people of color account for 31% (18% blacks and 13% Hispanics). In 2001, whites accounted for 54% of deaths compared to 46% for people of color (28% black and 18% Hispanic).

Through 1993, the MSM exposure category accounted for the largest number of deaths among people reported with AIDS. In 1994, the number of deaths among persons with AIDS where IDU was the mode of exposure (464 or 39%) surpassed the number of deaths where MSM was the mode of exposure (454). From 1993 (the peak year of deaths for MSM, 457) to 1999 and 2000 (the years with the lowest MSM deaths, 57 each year) the number of deaths decreased by 88%. In 2001, the number of MSM deaths increased to 72. From 1994 (the peak year of deaths for IDU, 464) to 2001, the number of deaths among people with AIDS with IDU mode of exposure decreased by 65%. In 1995, deaths among people with AIDS with heterosexual risk peaked at 130 deaths.

Despite overall declines in mortality among persons with HIV/AIDS, mortality has been experienced differentially among various subpopulations. Even in this era of highly effective treatment, addressing disparities in care, preventing secondary transmission, and meeting the social and medical needs of persons living with HIV or AIDS remain significant public health challenges.

The death data presented in this analysis include all deaths among people reported with AIDS in Massachusetts including deaths that were due to causes not related to the person's HIV infection, such as liver disease, heart disease, non-HIV related cancers, drug overdoses, accidents, homicide and suicide where HIV infection may not be indicated on the death certificate. This explains differences between data on deaths among AIDS cases in Massachusetts as reported to the HIV/AIDS Surveillance Program compared to the data reported as due to HIV/AIDS in "Massachusetts Deaths."

AIDS Incidence, Prevalence, and Deaths by Year: Reported AIDS Cases, Massachusetts, 1990-2001



Data Source: [illegible]

Who's the Source Case?

You received a telephone call the middle of October from the infection control practitioner (ICP) nurse at the local community hospital, reporting a number of tuberculin skin test (TST) conversions among staff on all shifts of one patient unit. Nineteen staff who worked on or frequented the unit, including nurses, respiratory therapists (RT), miscellaneous staff, and one physician, had converted their TSTs in the last several months.

What additional information would be helpful in the investigation?

- *Information regarding the hospital's testing procedures.* Who administered the TSTs and were they experienced in administering and reading the tests? Which PPD solution was used in the TST? Was there a recent change in PPD product? What size were the reactions to the TSTs? Did anyone exhibit symptoms of TB? What was the staff-testing schedule and when did the exposed staff receive their last TSTs?

- *The physical layout of the unit and its relationship to other units, ventilation patterns, and the operation of any isolation rooms.* What is the physical layout of the unit and it's physical proximity to other units? How is the air circulated and ventilated on the unit? Are there negative pressure isolation rooms on the unit and have they been checked to ensure the ventilation system is running properly? Does the hospital have a TB Exposure Plan? Were the TB isolation precautions followed?

- *Clinical profile of patients on the unit.* What has been the clinical profile of the patients on the unit? Did any of the patients have respiratory symptoms? Have any of the patients had a history of exposure to someone with infectious TB? Did any of the patients have symptoms consistent with active TB disease? Did any of the patients have conditions that put them at increased risk of developing TB after becoming infected, such as HIV, or diabetes? Were respiratory procedures conducted that might have caused coughing or some other aerosolization of secretions on the unit?

What investigation activities would you recommend?

- Consider inviting the state TB Division to assist with the investigation.

- Expand the testing of other hospital staff systematically. Try to narrow down the potential exposure period, by examining employment histories, work assignments, and TST results. Several employees had started or left employment in the last several months, establishing a three-month exposure period.

- Conduct an investigation to identify potential infectious patients and review their clinical records. Prioritize patients with respiratory disease. Ask the Medical Records Department to generate lists of patients who had diagnoses of respiratory disease.

- Conduct an epidemiological investigation to identify and track patient/staff interactions to analyze potential exposure patterns. Look at staffing patterns and work assignments to see if there were any relationships. Include staff that worked part-time or were not on the unit often.

- Send a letter to notify physicians whose patients were identified as being on the unit during the exposure period. Request that they and their patients have a TST and send the results to the hospital.

- Follow-up on any source case or secondary cases that are identified

- Document the results of the investigation.

Save The Date

Regional TB Update: *The next regional TB Update conference will be held at the Lahey Clinic in Bulington on Thursday, January 30, 2003. For more information call Debra Thimas at the Metrowest TB regional office at 781-828-7041.*

The Eighth Annual Massachusetts Immunization Skills Building Conference: *8:30 AM to 4:30 PM on May 22, 2003 at the Best Western Royal Plaza Hotel in Marlborough, MA. For more information, contact the Massachusetts Immunization Program at (617) 983-6800.*

Victims of a Severe Form of Trafficking

There is increasing recognition that slavery still exists; that men, women and children are trafficked; and that the toll on societies, families and individuals is tremendous. Worldwide, trafficking in persons is estimated to victimize some 700,000 individuals annually, most of them women and children. The number of women and children trafficked into the U.S. each year is thought to be 50,000; the number of men is not known. In response, the U.S. Congress passed, and President Clinton signed into law, the Trafficking Victims Protection Act of 2000 [Public Law 106-386].

The Trafficking Victims Protection Act aims to reduce trafficking of persons into the United States through increased law enforcement to ensure effective punishment of traffickers, to protect victims and to provide federal and state assistance to victims. Provisions in the law make adult victims of severe forms of trafficking who have been certified by the Department of Health and Human Services, eligible for refugee benefits and services. Minors are also eligible for benefits and services but do not need to be certified.

Severe forms of trafficking in persons are defined in the law and include sex trafficking and involuntary servitude, peonage, debt bondage, or slavery. The certification process for adults involves the determination that an individual is willing to assist in the investigation and prosecution of traffickers and that their continual presence in the U.S. is essential to those actions.

Refugee benefits and services are time-limited and include medical benefits, employment services, English language training, and cash assistance, with the goal of self-sufficiency. Refugee health assessment providers will be responsible for the initial medical evaluation of victims of trafficking. Like asylees, victims of trafficking do not have overseas medical screening. Many may have been victims of sexual abuse and violence. Consequently, medical clinicians should be particularly sensitive to these issues when evaluating victims of trafficking. Testing for sexually transmitted diseases, HIV, and other diseases spread by contact with bodily fluids should be considered. In regards to exposure to violence, clinicians should consider mental health screening for depression, anxiety, and posttraumatic stress disorder and refer patients to experienced mental health clinicians, if deemed appropriate.

During fiscal year 2001 (October 1, 2000 through September 30, 2001), the Office of Refugee Resettlement, Department of Health and Human Services, issued 196 certification letters to adults. In addition, four minors were issued eligibility letters. Most were females (177/200). Although victims of trafficking were in 19 states plus the District of Columbia, nearly 75% were in California, Hawaii, Texas, and Pennsylvania. Staff from the Office of Refugee Resettlement also conducted outreach and education sessions throughout the U.S. to increase awareness about trafficking in persons.

Sources:
Department of Health and Human Services, Office of Refugee Resettlement State Letter #01-13; on the web at www.acf.dhhs.gov/programs/orr
Department of Health and Human Services, Office of Refugee Resettlement: Trafficking Victims Protection Act of 2000 - FY2001 Annual Report

Refugee Admissions Update

Refugee admissions during the federal fiscal year 2002 that ended on September 30, 2002 were profoundly affected by the September 11, 2001 terrorist attacks. Enhanced security measures slowed both overseas processing and entry into the United States. As a result, just over 27,000 refugees arrived in the U.S. during the year – far short of the 70,000 admissions that had been authorized. In Massachusetts, 997 refugees were resettled, compared with 2,061 in the previous year.

President George W. Bush signed the Presidential Determination on FY 2003 Refugee Admissions to the United States on October 16, 2002. Although a total of 70,000 admissions were authorized, 20,000 were in the "unallocated reserve" category. These reserve admissions have not been used in recent years, leaving the projected ceiling for admissions at 50,000. The admission numbers are allocated by region as follows:

Region	*Ceiling*
Africa	20,000
East Asia	4,000
Eastern Europe	2,500
Former Soviet Union	14,000
Latin America/Caribbean	2,500
Near East/South Asia	7,000

Refugee advocates and many members of Congress had called for an increase in FY2003 admission ceilings to at least 100,000 in order to accommodate those refugees who would have been admitted in FY2002 as well as those currently in need of resettlement.

Community-Based TB Prevention

The most significant challenge to the elimination of tuberculosis (TB) in Massachusetts is growing populations of people with latent TB infection who are at highest risk of progressing to TB disease. During the six year period from 1993 to 2001, tuberculosis was diagnosed among 2663 Massachusetts residents, 63% (1691) of whom were foreign-born. Over time, the percentage of TB cases in non-US born individuals has continued to rise. In 2001, 77% of TB cases were among persons born outside the United States; in 1986, the proportion was only 31%. The epidemiology of TB among the foreign-born in Massachusetts reflects the heterogeneity of the resident foreign-born population as well as the differential risk for disease due to factors such as exposure to TB prior to emigration, age, and length of time in the US.

In 1997, with the help of The Medical Foundation, the Division took its first ambitious steps toward community–based prevention. While maintaining its core functions for TB control, the Division carried out team building exercises in order to focus on communities at highest-risk for developing TB disease. Under the guidance of a CDC Prevention Specialist, the Division partnered with nontraditional agencies/organizations to increase awareness of TB in three selected communities. The main purpose of these projects has been to build partnerships with key individuals and community groups at the local level in order to share ownership of TB control within these selected communities. Our initiative in Cambridge, which focuses on the Haitian Community, is one of the original projects.

Cambridge Project

In early 1999, the Division approached various Haitian community agencies to solicit input in developing a community approach to TB prevention. These initial meetings led to a local Haitian task force on TB. This task force was comprised of many individuals and representatives from various agencies and local community groups in Cambridge. The initial purpose of this task force was to raise awareness of latent TB infection (LTBI) in the community as well as among local Haitian service providers.

In order to identify and develop a unified intervention, the task force decided on a two-step approach to informing the local community about TB. First, the taskforce worked with local Haitian radio stations to invite speakers to talk about TB on the radio. The goal was to educate radio listeners about the risks of TB. Secondly, the task force decided to hold two community focus groups to help identify and develop specific strategies that would be effective in presenting TB prevention and screening in a culturally appropriate manner. As a result of these focus groups, the taskforce recommended that the TB Division fund a TB video that would be shown in beauty salons and barbershops. The barbershops and beauty salons identified by our community partners were gathering places for the local Haitian community and locations considered appropriate to share health-related information.

With the assistance of CDC funding, the Division was able to partner with the Community Affairs Program of the Cambridge Health Alliance. The Alliance began developing a script and producing a Haitian TB Prevention video in late 2000. With the completion of the Haitian-Creole video in May of 2001, regular outreach sessions began in June 2001 at five local barbershops and beauty salons. The showing of the video at local beauty salons and barbershops was tied to a raffle. After watching the video, those completing the raffle ticket information were asked questions about latent TB infection. Raffle winners received free hair care products and services at that salon.

As a result of initial efforts, the community requested additional health information from the local and state health departments. On several occasions, physicians have gone out to the barbershops and beauty salons and provided health education on TB, STDs, prostate cancer, high-blood pressure, and diabetes. In May 2002, our prevention partners broadened the potential viewing audience by showing the video on local cable access TV.

The Cambridge Community Affairs Program has built upon initial efforts by incorporating TB education into their recently created Volunteer Health Advisor program. The Volunteer Health Advisor program was developed as part of the department of Community Affairs "100% Access, 0 Disparities Campaign". The purpose of the program is to increase access to preventive health care services and reduce health disparities among the uninsured. The Volunteer Advisors act as extensions of the Community Health Workers and, as leaders within their communities, can reach the most 'hard to reach' segments of the community. Currently there are over ten Community Health Advisors in the program and each is a resource for health care access as well as education on HIV & AIDS, chronic disease, cancer and TB.

Public Health Nurse Spotlight

In this Update issue and in upcoming issues, the TB Division would like to recognize an individual whose hard work and dedication has made a difference in TB control. For this issue we are highlighting Public Health Nurse Anne Donovan of the Lawrence Health Department. Anne has worked at the Health Department for more than 20 years; in addition to overseeing blood pressure and flu clinics, and administering immunizations, Anne is clinic nurse for the TB clinic, held twice monthly at Lawrence General Hospital. She has two nursing coworkers and a clerk now, but that wasn't always the case – for several years Anne worked alone, covering all of the health department's communicable disease issues.

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Anne is not one to talk about her good deeds and accomplishments, but her colleagues will say that her dedication to her patients and to the Lawrence community is unsurpassed. As case manager for TB patients and their contacts, Anne has given countless hours of her own time in conducting home visits, doing DOT, and monitoring patients for treatment adherence. When the health department was understaffed, she worked through her lunch break. When no car was available for her use, she walked to see her patients. Anne has invited patients into her home for DOT because it was convenient for them. ("You have to bend a little," she says.) She has given homeless patients her own money to buy food. And because Lawrence has a large Spanish-speaking population, Anne taught herself to speak Spanish to facilitate communication and trust with her patients.

In answer to the question, what is the best part of her job, Anne replied, "Contact with the people and the community – and my coworkers are great." When asked about challenges in her job as a TB nurse, Anne noted the difficulties in finding contacts to TB cases. ("No one ever has any friends or relatives!") She counters this problem by looking for signs of other people in the house, being very specific with her questions, and explaining what a contact is.

Anne credits her work ethic to her role models, retired Lawrence Health Department nurses Yvonne Dube and Lucy Cameron, saying they taught her not to judge people by external standards – everyone is different. Of her coworkers, Brian Zahn, RN, Catherine Ouellette, RN, and Ellie Guerrero, Anne says, "When you work with good people, the job is easy."

The TB Division is pleased to recognize Anne Donovan for her outstanding achievements in TB control and for her dedication to the community and the people of Lawrence.

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Christine C. Ferguson, Commissioner of Public Health

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Communicable Disease UPDATE

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Massachusetts Smallpox Pre-Event Vaccination Program

While the threat is small, the release of smallpox could have a devastating impact on the health of our nation. Smallpox vaccination is being debated in the news, and it is likely that you will be hearing questions from people in your community about smallpox, smallpox vaccine and what Massachusetts is doing to protect against smallpox as a potential bioterrorist threat.

In order to enhance the ability to respond to a potential smallpox event, every state has developed a pre-event smallpox vaccination program. The overall goal is to:

- vaccinate key ***volunteer*** healthcare workers who would treat and manage initial smallpox cases and their contacts; and
- vaccinate ***volunteer*** responders who would conduct investigations and outbreak control of the initial event.

In Massachusetts, the Department of Public Health (MDPH) plans to coordinate the vaccination of 10,000 volunteer health-care workers, public health workers and first responders over the next few months.

Hospital Workers: The first phase of this program is to train and administer smallpox vaccine to multidisciplinary teams in each of the Commonwealth's 76 acute care hospitals with emergency departments.

Community Responders: A statewide public health team from the Massachusetts Department of Public Health MDPH and volunteers in all seven bioterrorism perparedness and response regions; public health workers, first responders and public safety personnel, will be trained and vaccinated.

Capacity Building: To further enhance response capabilities, MDPH will also coordinate the training and vaccination of volunteer public health, home health and school nurses across the state.

In addition to the 10,000 volunteers who will be vaccinated through this program, the Department of Defense is vaccinating members of the military. Even if you are not directly involved in the smallpox vaccination program, persons in your

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New Guidelines for the Treatment of Tuberculosis

On February 15, 2003, the federal Centers for Disease Control and Prevention (CDC), in a joint effort with the American Thoracic Society (ATS) and the Infectious Diseases Society of America (IDSA), published new *Guidelines for the Treatment of Tuberculosis*. This statement represents the first major revision of the CDC treatment guidelines since 1994, and reflects contributions from new information that has accumulated since that time.

Briefly, the major changes in the document since 1994 include the following:

- Responsibility for successful completion of treatment is assigned to the public health program or to the private provider – not to the patient. It is our responsibility to see to it that our patients complete an adequate course of therapy.
- Patient-centered case management is reconsidered, long the standard in Massachusetts, with an adherence plan that emphasizes directly observed treatment (DOT) for all patients.
- Recommended treatment regimens are detailed and they are rated according to the strength of the evidence supporting their use.
- Sputum cultures should be obtained at the completion of the initial phase of therapy, especially in patients with cavitary disease, to identify patients with pulmonary tuberculosis who are at-risk of relapse.
- Extended treatment (by at least 3 months) is recommended for patients with drug-susceptible pulmonary TB with cavitation on their initial chest radiograph *and* positive sputum cultures at the completion of 2 months' therapy.
- The roles of rifabutin, rifapentine, and fluoroquinolones are discussed; a regimen utilizing rifapentine in a

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A Primer On Norovirus

Noroviruses, formerly referred to as "Norwalk-like viruses," are part of a family of viruses called caliciviruses. Infection with a norovirus can cause acute gastroenteritis characterized by diarrhea, abdominal cramps, nausea and vomiting. Norovirus illness has an incubation period of 12 to 48 hours and a duration of 12 to 60 hours. Elderly and immunocompromised patients may be sick longer. Treatment of norovirus infection is supportive consisting of maintenance of hydration and rest.

Noroviruses are spread through an infected person's stool or vomitus. Foodborne transmission is a common route of infection and direct or indirect person-to-person transmission is frequent. Indirect transmission is aided by the extreme hardiness of the virus in the environment as well as is highly infectious nature. The infectious dose is believed to be as low as 10 to 100 viral particles, while approximately one million particles are excreted per milliliter of stool. Shedding occurs in both symptomatic and asymptomatic persons. Shedding occurs while the person is ill and for up to two weeks post-recovery. There is also the possibility of pre-symptomatic shedding.

Noroviruses are very common: they account for 94% of non-bacterial gastroenteritis reported to the Centers for Disease Control and Prevention (CDC) for which a cause is identified. There are estimated to be 23 million cases each year in the United States, 9.2 million of which are believed to be foodborne.

Testing for noroviruses formally relied on electron microscopy, with the appearance of small, round structured particles as a diagnostic indicator. Serologic assays detect the presence of antibodies to the viral capsid protein and are more sensitive than electron microscopy. A new test for viral RNA purified from stool and vomitus specimens—a reverse-transcription polymerase chain reaction (RT-PCR) —is now being performed by many state public health laboratories. This assay's specificity is increased greatly by sequencing of the PCR product, which allows both for confirmation of the presence of norovirus and for molecular typing. Massachusetts Department of Public Health (MDPH) will test specimens related to an outbreak, if new cases are still occurring.

Norovirus gained notoriety in 2002 when several cruise ships were taken out of service after a large number of guests became ill from what was soon recognized as norovirus infection. In Massachusetts, foodborne transmission of norovirus caused illness in hundreds of persons attending several functions serving food prepared by a common vendor. Also, reports of clusters of person-to-person transmission of illness compatible with norovirus infection in long-term care facilities have increased in Massachusetts since November 2002.

Individuals with illness compatible with norovirus infection should be restricted from foodhandling activities for at least three days after the cessation of symptoms and should only return to work if scrupulous hand hygiene is assured. Foodhandling activities include, but are not limited to, preparing food, distributing medications, and providing oral care for patients. Cases of illness compatible with norovirus in foodhandlers should be reported to the local board of health where the foodhandler works. Outbreaks of norovirus are reportable to MDPH under the new *Reportable Diseases and Isolation and Quarantine Requirements* (105 CMR 300.000).

Q & A Regarding Antibacterial Soap

Public awareness about the importance of handwashing may be increasing, especially as outbreaks of norovirus on cruise ships make front-page news. However, more Americans are turning to "antibacterial" soaps in an attempt to ward off disease. New research suggests that such products may contribute to the emergence of antimicrobial resistance and to changes in environmental flora that could impact human health[1]. While antimicrobial soaps have a role in some health care settings, clinicians and public health practitioners should dispel the myth that antibacterial soaps are better than handwashing with regular soaps for the public.

What does "antibacterial" mean?
"Antibacterial" simply means that the product includes an ingredient that kills bacteria. Alcohol, bleach, and peroxide are antibacterials that have long been used in household cleaning products; they quickly kill bacteria and then evaporate. It is highly unlikely for bacteria to develop resistance to these ingredients.

Triclosan and triclocarban, however, are newer compounds that have been added to many household-cleaning products over the past twenty years. Triclosan and triclocarban kill bacteria over a period of time by leaving long-acting residue on surfaces. Triclosan is an additive in 76% of liquid soaps and triclocarban in 29% of bar soaps.

Can antibacterial cleaning products increase antibiotic resistance?
Evidence suggests that resistance to triclosan and triclocarban has already appeared, and widespread household use of products with these ingredients will likely increase bacterial resistance. Scientists are concerned that exposure to these products can help increase bacterial resistance to antibiotics as well.

Should you use household products with triclosan and triclocarbon?
Handwashing with ordinary soap and water and cleaning with non-residue forming products (alcohols, bleach, peroxides) are still recommended for general hygiene and household cleaning.

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New Pediatric Combination Vaccine

A new pentavalent combination vaccine, Pediarix™ (manufactured by Glaxo SmithKline) was licensed by the Food and Drug Administration (FDA) on December 17, 2002. This pentavalent vaccine is a combination of DTaP, hepatitis B, and IPV recommended for use at 2, 4 and 6 months of age in place of the individual vaccines currently given at those ages. Pediarix™ can reduce the number of injections a child receives by at least 5 doses by replacing dose 2 and 3 of the hepatitis B series and dose 1, 2, and 3 of the DTaP and IPV series. The Advisory Committee on Immunization Practices (ACIP) just recently recommended this vaccine be an acceptable option as part of the routine childhood immunization schedule, which should continue to include the first dose of hepatitis B vaccine at birth. A federal contract for its purchase was also just recently established. However, since Pediarix™ costs 7% more than the individual vaccines given separately, the Massachusetts Immunization Program would need additional federal and state funding in order to supply this vaccine to pediatric practices eventually. At this time, the scheduling of the introduction of this new vaccine is unclear and will depend on identification of sufficient funds.

Immunization Program Presented With Awards at CDC's National Hepatitis Coordinators' Conference in January

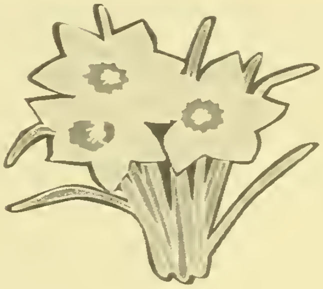
The Immunization Program received two achievement awards for perinatal hepatitis B prevention and case management at the National Hepatitis Coordinators' Conference in San Antonio, Texas, on January 27, 2003.

The first award was presented to the Immunization Program by the CDC for Outstanding Achievement in Perinatal Hepatitis B Case Management. The Immunization Program reported a 13% increase in the administration of hepatitis B immune globulin (HBIG) and the birth dose of hepatitis B vaccine to infants born to hepatitis B surface antigen (HBsAg)-positive women from 2000 to 2001.

In addition, the Program also received an Immunization Action Coalition (IAC) SuperHero Award for its commitment, courage, and creativity in championing the hepatitis B vaccine birth dose.

Martha Badger, Nursing Supervisor, accepted the awards on behalf of the entire Immunization Program staff.

New Reportable Diseases and Isolation and Quarantine Regulations went into effect February 14, 2003. Find information regarding the changes at www.state.ma.us/dph.



Smallpox

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community may be among those vaccinated or household contacts of vaccinees.

Smallpox vaccine is a live-virus, vaccinia virus, a poxvirus related to smallpox. An immune response to vaccinia provides protection against smallpox. Because live vaccinia virus is present at the vaccination site until the scab separates from the skin (approximately 14-21 days post vaccination), the potential exists for inadvertent inoculation of vaccinia to other parts of the body, or to the vaccinee's close contacts. Vaccination site care and handwashing are essential to preventing secondary transmission. As MDPH begins to inform the public about the smallpox pre-event vaccination program in Massachusetts, it is likely that people in your communities will have questions about smallpox and the vaccine.

All vaccinees will be given a number to call if they have questions or experience vaccine reactions. However, vaccinees or their household contacts may ask you about adverse events from vaccination. Assistance with diagnosis and management of adverse events following smallpox vaccination is available at:

CDC Smallpox Vaccine Clinician Information Line
(24 hours/7 days a week): (877) 554-4625

MDPH Division of Epidemiology and Immunization
(24 hours/7 days a week): (617) 983-6800 or toll free at (888) 658-2850

Additional Resources

We are working with professional organizations to provide information and training opportunities to all health-care providers. In the meantime, please visit the CDC website: www.cdc.gov/smallpox, where extensive materials, including articles, fact sheets, and training modules on smallpox disease and vaccination, can be found.

For general questions about smallpox or the smallpox vaccination program in Massachusetts, please call the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or visit our website at www.state.ma.us/dph and click on "Emergency Preparedness and Response."

Regional Updates On HIV/AIDS: Analysis By Health Service Regions

As of February 1, 2003, a total of 14,004 people have been reported to the HIV/AIDS Surveillance Program of Massachusetts Department of Public Health and are known to be living with HIV/AIDS in Massachusetts. In order to understand the HIV/AIDS epidemic better, as well as to target services provided by the Department of Public Health and others, information on reported cases is analyzed for the six Health Service Regions (HSRs). The HSRs are: Boston, Metrowest, Northeast, Southeast, Central and Western. Data on incarcerated persons are considered separately, regardless of the location of the facility in which they were incarcerated at the time of their diagnosis.

The total number of people living with HIV/AIDS (PLWHA) within each HSR and the percentage of statewide cases within each HSR, as well as the rate [per 100,000 population in each HSR], are as follows: Boston — 4,535 (32.4%) [607], Metrowest – 1,685 (12.0%) [114], Northeast – 1,954 (14.0%) [156], Southeast – 1,973 (14.1%) [159], Central – 1,211 (8.6%) [150] and Western – 1,620 (11.6%) [197]. There are significant differences in the distribution of reported mode of exposure to HIV, by gender, and race/ethnicity across HSRs. Careful consideration of these differences helps target prevention programs and client services.

Some of the more prominent differences across HSRs are as follows: Among PLWHA, the proportion of cases among females is 23.6% in the Boston HSR but as high as 37.7% in the Western HSR. People of white race constitute 30.2% of PLWHA in the Western HSR but 57.4% of the cases in the Metrowest; individuals who are Hispanic constitute 10.0% of PLWHA in the Metrowest but 49% in the Western HSR; and people whose race is black constitute 16.8% of PLWHA in the Central HSR, but 30.4% in the Metrowest HSR.

Based upon reported mode of exposure, PLWHA whose mode of exposure to HIV was 'male sex w/male' (MSM) constitute 44.6% of cases in the Boston HSR, but only 19.1% of the HIV/AIDS cases in the Central HSR. PLWHA with 'Injection Drug Use' (IDU) as their risk of HIV infection constitute 20.6% of the cases in the Metrowest HSR but 42.8% of the cases in the Central HSR. PLWHA with heterosexual mode of exposure to HIV constitute 11.2% of the cases in the Metrowest HSR but 19.2% in the Central HSR.

Differences across HSRs indicate that the HIV/AIDS epidemic in Massachusetts is a diverse epidemic; presenting as 'regional' epidemics across different subpopulations.

Profile of People Living with HIV/AIDS (PLWHA) In Massachusetts: Analysis By HSR* (number, %)

	State **	Boston	MetroWest	Northeast	Southeast	Central	Western	Prisons
Gender: **Male**	10,032 (71.6)	3,467 (76.4)	1,215 (72.1)	1,332 (68.2)	1,382 (70.0)	761 (62.8)	1,009 (62.3)	860 (84.6)
Female	3,972 (28.4)	1,068 (23.6)	470 (27.9)	622 (31.8)	591 (30.0)	450 (37.2)	611 (37.7)	156 (15.4)
Race/Etnicity: **White**	6,627 (47.3)	1,956 (43.1)	968 (57.4)	1,008 (51.6)	1,324 (67.1)	568 (46.9)	490 (30.2)	308 (30.3)
Black	3,706 (26.5)	1,709 (21.5)	512 (30.4)	331 (16.9)	370 (18.8)	203 (16.8)	319 (19.7)	260 (25.6)
Hispanic	3,421 (24.4)	780 (17.2)	168 (10.0)	556 (28.5)	255 (12.9)	424 (35.0)	793 (49.0)	442 (43.5)
Other	250 (1.8)	90 (2.0)	37 (2.2)	59 (3.0)	24 (1.2)	16 (1.3)	18 (1.1)	6 (0.6)
Risk of HIV Infection (Adults): **MSM**	4,498 (32.3)	2,007 (44.6)	655 (39.2)	568 (29.3)	668 (34.1)	230 (19.1)	320 (19.9)	46 (4.5)
IDU	4,462 (32.1)	970 (21.5)	344 (20.6)	550 (28.4)	639 (32.6)	515 (42.8)	671 (41.7)	771 (75.9)
MSM/IDU	457 (3.3)	159 (3.5)	46 (2.7)	59 (3.0)	67 (3.4)	34 (2.8)	43 (2.7)	49 (4.8)
Heterosexual	1,887 (13.6)	509 (11.3)	188 (11.2)	306 (15.8)	291 (14.9)	231 (19.2)	299 (18.6)	62 (6.1)
Blood/Blood Products Related	129 (0.9)	38 (0.8)	30 (1.8)	18 (0.9)	20 (1.0)	14 (1.2)	8 (0.5)	1 (0.1)
No Identified Risk (NIR)***	629 (4.5)	201 (4.5)	102 (6.1)	112 (5.8	87 (4.4)	29 (2.4)	71 (4.4)	26 (2.6)
NIR (Presumed Heterosexual)	1,851 (13.3)	620 (13.8)	308 (18.4)	327 (16.9)	186 (9.5)	150 (12.5)	197 (12.2)	61 (6.0)
Pediatric (AIDS Only)****	91 (--)	31 (--)	12 (--)	14 (--)	15 (--)	8 (--)	11 (--)	NA
TOTAL	**14,004**	**4,535**	**1,685**	**1,954**	**1,973**	**1,211**	**1,620**	**1,016**

*Residence at the time of HIV/AIDS Diagnosis
**State Total includes ten persons whose city/town of residence was unknown at the time of report
***Risk of partner is unknown and primary risk categories have been denied; definition revised 7/1/99
****Information on pediatric HIV-infection is collected through a separate system and hence the data is not presented here

Hematuria in an African Immigrant

A 20 year old male Congolese immigrant who arrived in the U.S. to attend college had his first medical examination since coming to the U.S.

His medical history is unremarkable. As is typical in immigrants from Central Africa, he has a history of malaria, does not present with allergies and does not use medications of any sort. His physical exam, including vital signs is normal.

A complete blood count (CBC) and an urinalysis are both done in your CLIA-certified lab. A PPD skin test is planted. Risk factors that would indicate concern for HIV infection, hepatitis, and sexually transmitted diseases are discussed.

The CBC has an abnormal number of eosinophils (13% of 9,300 white blood cells). The urine is positive for blood, with 30-50 red blood cells per high powered field under the microscope.

Thirteen percent of 9,300 equates to an absolute eosinophil level of 1,209 per microliter. That is well over the commonly accepted upper limits of normal at 450 – 650 per microliter, so it represents eosinophilia. Thinking that the hematuria (blood in the urine) and eosinophilia are most likely related, you consult your infectious disease reference. Quickly, you arrive at the possible diagnosis of schistosomiasis. While eosinophilia can be caused by a number parasitic infections and other diseases, this diagnosis seems reasonable as your patient has recently arrived from the Congo (formerly Zaire) in central Africa, an area with endemic schistosomiasis.

World-wide, schistosomiasis is one of the most common causes of hematuria. *Schistosoma* species trematodes are endemic in fresh and salt water throughout much of the world. The parasites have a complex life cycle involving snails and free-living forms. Non-human pathogenic species can cause "swimmer's itch" when the larvae, called cercariae, penetrate the skin. Human pathogenic species depend on fresh water snails as their vector and have various geographic distributions. *S. haematobium* is found mainly in Africa but also in the Eastern Mediterranean region. After skin penetration, *S. haematobium* penetrates the skin and migrates through the bloodstream to the lungs before ultimately lodging in blood vessels around the bladder. (Other species lodge near the bowel.) After 4-6 weeks, an acute illness termed "Katayama Fever" ensues and is characterized by fever, malaise, lymphadenopathy, and eosinophilia. With species causing gastrointestinal involvement, a patient may have bloody diarrhea and a tender enlarged liver. Chronic disease reflects the relative worm burden and degree of scarring and inflammation at sites of deposited eggs. Bladder symptoms may include pain or burning on urination, hematuria, secondary infections, and pelvic pain.

Schistosomiasis is diagnosed by microscopic examination of the stool or filtered urine for the parasites eggs. Egg excretion peaks in the early afternoon. Blood tests may be helpful, but sometimes biopsies may be needed. Serologic testing should be conducted by a reliable laboratory. Clinicians can consult the Centers for Disease Control and Prevention for serologic testing. Treatment is relatively simple with a single day's course of praziquantel. Some patients may require consultation with a urologist or gastroenterologist for treatment of the complications from scarring and inflammation. In any case, follow-up should include repeat urinalysis and CBC to document improvement after treatment.

Antibacterial Soap

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What about alcohol-based hand gels?

Recent research suggests that waterless, alcohol-based hand gels and rubs are more effective germ killers than soap because they kill germs very rapidly. They are also convenient and gentler to hands than repeated washings with soap and water. And they do not promote resistance since their antibacterial activity is from alcohol only. However, alcohol-based hand gels are both poisonous if eaten and flammable; containers should be kept out of reach of children. Alcohol-based gels should not replace handwashing and the teaching of good handwashing techniques to children.

The Centers for Disease Control and Prevention (CDC) recommends that alcohol-based products should be considered standard components of hand hygiene for heath care workers in hospitals.[2] But the CDC has made no recommendations for non-hospital use. Since alcohol-based hand gels do not remove surface dirt, regular, non-antibacterial soap products should remain your first choice for cleaning at home.

This article was adapted from the REACH* Mass Winter 2003 Newsletter.
*REducing Antibiotics for CHildren

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[1] Levy, Stuart B. Antibacterial Household Products: Cause for Concern. Emerging Infectious Diseases. 2001. Vol. 7, No. 3, Supplement: S12-51S.

[2] Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HIPAC/SHEA/APIC/ISDA Hand Hygiene Task Force. MMWR 2002; 51(No.RR-16).

Refugee and Immigrant Health

Hepatitis B in Refugees

Hepatitis B virus infection continues to be a serious health problem among refugee communities. Most refugees come from regions of the world with either high or intermediate endemicity of hepatitis B. These include most of Asia, the Pacific islands, Sub-Saharan Africa, Eastern Europe, and the Middle East.

High prevalence areas, which are defined as areas where 8% or more of the population has chronic hepatitis B, encompass 45% of the world's population. The lifetime risk of infection is over 60%, and early childhood infections are common. In intermediate prevalence areas, from 2 to 7% of the populations are hepatitis B carriers, the lifetime risk of infection is 20%-60%, and infections occur in all age groups. Approximately 43% of the global population is in these intermediate prevalence areas.

Worldwide, 2 billion people have hepatitis B serologic markers indicating past or current infection. Among these, 350 million have chronic infection and are at risk of liver failure and liver cancer caused by hepatitis B infection. In the U.S., national data indicate that among newly arrived Southeast Asian refugees, up to 50% are immune from naturally acquired infection, 14% are carriers, and about 36% are susceptible). See Table 1 for the prevalences of hepatitis B infection among refugees in Massachusetts.

Hepatitis B infection among newly arrived refugees in Massachusetts, FY 01

World Region	HBV Prevalence In Region	# of Refugees Screened	%Hepatitis B Active Infection	
			Adults ≥18 y.o.	Children <18 y.o.
Sub-Saharan Africa	High	726	10.0%	7.4%
Americas and Caribbean	Low	133	2.1%	0%
East and Southeast Asia	High	170	7.8%	1.5%
Near East and South Asia	Intermediate	182	1.0%	0%
Eastern Europe and Formerly Socialist Economies	Intermediate	1,288	2.2%	1.2%

When acquired at birth, hepatitis B causes death from liver disease, including hepatocellular carcinoma (liver cancer), in up to 25% of those infected. Yet hepatitis B is a preventable disease. Safe, effective, and affordable vaccination is available. In fact, liver cancer, which is especially prevalent in areas of world where hepatitis B is common, preventable by vaccination.

The U.S. Centers for Disease Control and Prevention has prioritized the elimination of hepatitis B virus transmission in the U.S. Objectives are to prevent chronic infection, chronic liver disease, primary liver cancer, and acute symptomatic infection. The strategies for elimination of transmission include interruption of perinatal transmission by screening pregnant women and treating their newborns with immunoglobulin against Hepatitis B as well as immediate vaccination and follow-up. Other strategies focus on vaccination and include routine vaccination of all infants, children in high-risk groups, adolescents, unvaccinated children at 11-12 years of age, "high-risk" adolescents at all ages, and adults in high-risk groups. Hepatitis B "catch-up" – vaccinating all children 0-18 years – is particularly recommended for children of parents from moderate/high risk endemic areas.

In Massachusetts, all refugees are screened for hepatitis B infection or immunity shortly after arrival as part of the Refugee Health Assessment Program. When a refugee is infected, the need for vaccination of family members is assessed. Referral to the appropriate outreach educator of the Refugee and Immigrant Health Program is made. The outreach educator staff are active in ensuring follow-up of refugee patients and their household contacts. For the carrier, education includes the need for routine primary care, reducing the risk of transmission, and good liver health. The latter includes good nutrition and, if the individual drinks alcohol, reducing the number and frequency of drinks. For family contacts, information on risk reduction is also provided. The importance and value of vaccination is emphasized. Because most refugees complete the first two doses of hepatitis B immunization during the health assessment, it is the third dose at six months that is tracked. In addition, outreach educators assist in tracking families when refugee women give birth in the U.S. Thus, infants receive timely vaccination following their initial newborn treatment as well as prompt screening for infection.

Important Information In Regards to Communicable Disease Update

Communicable Disease Update is about to under go some major changes in distribution. Please see our summer issue for details of electronic distribution and a subscriber survey.

Mary Corron, R.N., Public Health Nurse in Worcester

Public health nursing is a specialized field requiring knowledge of the art and science of nursing and public health. In this issue we highlight Public Health Nurse Mary Corron, R.N for her work and dedication at the Worcester Health Department. The city of Worcester has the highest number of TB cases in the central/western region. Mary has worked for the health department for ten years: seven years as a school nurse and three years as tuberculosis (TB) case manager. Prior to her employment with the health department, she worked as an emergency room nurse at a Worcester hospital.

As the TB case manager, Mary works closely with the Getchell/Ward TB Clinic team and six other public health nurses. She brings experience and vitality to the health department. Mary meets the many challenges of TB nursing with her upbeat personality. She has never been heard to say, "No, we can't do that," rather, she states, "O.K. we'll try our best."

Because Worcester is the second largest city in MA, the team approach works best. Thirteen cases of TB were reported in Worcester in 2002. Mary, with the help of the other public health nurses, was able to organize and perform discharge planning, directly observed therapy (DOT), home visits, contact investigations, education, prevention, clinic visits, and counseling. When challenging problems with a case arise, Mary and the nurses are able to confer and exchange ideas among themselves and the state tuberculosis surveillance area (TSA) nurse to develop the best possible care plan for the patient. These are all elements of an excellent TB program.

New TB Treatment Guidelines

continued from page one

once-a-week continuation phase is discussed.

- Some practical aspects of treatment, such as actual drug administration, use of fixed-dose drug combinations, monitoring and management of adverse events, and drug interactions, are discussed.
- Treatment completion is defined explicitly by the number of doses ingested, as well as the actual duration of the treatment.
- Special treatment situations, such as HIV infection, TB in children, extrapulmonary TB, culture negative TB, TB in pregnancy and in women who are breast feeding, hepatic disease, and renal disease are discussed.
- The management of TB caused by drug-resistant organisms is discussed.
- These recommendations are compared with those of the WHO and the IUATLD, and the DOTS (DOT short course) strategy is described.
- The status of current research to improve treatment is reviewed.

In Massachusetts, particular emphasis must be placed on **monthly monitoring of sputum cultures** of patients with pulmonary tuberculosis, especially those with cavitation on their initial chest radiographs, until time of conversion. In a CDC study cited in the new *Guidelines*, patients with positive sputum cultures at 2 months into treatment had higher rates of relapse. Also, consideration should be given to extending therapy and perhaps looking for a reason why sputum conversion has not occurred in all patients who do not convert their sputum at 2 months, regardless of whether cavitation is present.

In addition, renewed emphasis must be placed on identifying **close contacts** of cases and suspects. These individuals, especially children and immunocompromised persons, are at extraordinary risk for developing disease; they should be evaluated by a clinician skilled in tuberculosis prevention and treatment, and they should be treated, where appropriate. In this regard, the role of the physician in getting contacts identified, evaluated, and treated cannot be underestimated. Patients tend to take advice from their physicians seriously, and every effort should be made to ensure appropriate management of all susceptible contacts of all our cases.

We encourage you to read the document in detail; it is published in the American Journal of Respiratory and Critical Care Medicine Vol 167, pp. 603-662, 2003, and it can be accessed at the ATS web site: www.thoracic.org/adobe/statements/treattb.pdf , or the CDC web site: www.cdc.gov/nchstp/tb/new/new.htm. Please feel free to call Dr. John Bernardo at 617-983-6970, if you have any questions.

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Save The Dates

Adult Immunization Update

June 26, 2003, Noon to 2:30, State Lab Institute, 305 South Street, Jamaica Plain, MA. (No public parking at this location, please use public transportation.) This broadcast will update healthcare providers on current adult immunization practice. It will highlight the 2002-2003 Recommended Adult Immunization Schedule and strategies to improve adult immunization coverage levels. Visit the CDC/ATSDR Training and Continuing Education Online System at www.phppo.cdc.gov/phtnonline to register for this course, course number SB0127.

State/Local Pandemic Influenza Planning Committee Meeting

June 18, 2003, 10:00 to 11:30 AM, State Lab Institute, 305 South Street, Jamaica Plain, MA. (No public parking at this location, please use public transportation.) All are welcome. Contact Donna Lazorik at (617) 983-6821 for more information.

Emergency Preparedness, Incident Command and Connectivity

July 8, 2003, 1:00 to 4:00 PM, various satellite broadcast locations, TBA. The broadcast is comprised of three training sessions: The first session is on Emergency Preparedness, an overview of the "who-does-what" in an event; the second session is on Connectivity, an integrative approach to problem solving, negotiation and conflict resolution designed to enhance preparedness planning and management; the third session familiarizes participants with the design, implementation, and evaluation of Incident Command Systems. Contact Allison Hackbarth at allison.hackbarth@state.ma.us or (617) 983-6800 for more information.

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Christine C. Ferguson, Commissioner of Public Health

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 11, No.3 Summer 2003

Sexually Transmitted Diseases and Adolescents

Recent reports by the National Campaign to Prevent Teen Pregnancy and the Kaiser Family Foundation suggest that teens continue to have significant gaps in their understanding of STDs and are engaging in sexual activity at a younger age. Early sexual activity is associated with increased risk for greater number of sexual partners, acquisition of STDs and pregnancy.

The National Campaign to Prevent Teen Pregnancy: *14 and Younger: The Sexual Behavior of Young Adolescents* [1] is a review of literature and data sets regarding sexual behavior in younger teens. The report concludes that, during the 1990s, up to 18-19% of teens aged 14 years or younger were sexually active. Boys were slightly more likely to have had sex than girls. Despite decreases in sexual activity among 15-19 year old girls, the proportion of girls 14 years old and younger having sexual intercourse increased over the same time period. However, sexual activity among younger teens is more likely to be sporadic, rather than consistent.

Early sexual activity is linked to a greater number of sexual partners over time and increased risks for both pregnancy and STDs. Younger teens are more likely to have relationships with older partners, and the older the partner the more likely that sexual intercourse is a part of the relationship. Approximately one in seven sexually experienced 14-year-old girls report having been pregnant. Only about one-third of parents of sexually experienced 14-year-olds are aware of their child's sexual activity.

The Kaiser Family Foundation's *National Survey of Adolescents and Young Adults: Sexual Health Knowledge, Attitudes and Experiences*[2] found that one in five adolescents thought that birth control pills protected against HIV infection and other STDs. Many adolescents were unaware that STDs could be transmitted by oral sex. In general, accurate knowledge of STDs and how they are transmitted was lacking among adolescents. The survey found a very strong desire on the part of adolescents and young adults for more information about sex and sexual health. One quarter reported a need for more information about condoms, 40% wanted to acquire more capacity to communicate effectively with partners and three-quarters expressed a need for more information about how to recognize STDs and HIV infection, what testing and screening involves, and where they can get tested for STDs and HIV infection.

In Massachusetts, rates of reported chlamydia infection and gonorrhea reached historic low levels in the mid-1990s. However, since that time, rates of reported infection have increased in teens of all ages. This trend has been gradual in adolescents 15-19

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Improving Hepatitis C Surveillance

Hepatitis C virus (HCV) infection is reportable to local boards of health and the Massachusetts Department of Public Health (MDPH). It is the responsibility of local health departments (LHD) to investigate cases of HCV infection. Unfortunately, with an extremely high volume of cases being reported, many health departments do not have the resources to manage the caseload. This has resulted in limited data collection and delays in processing and analyzing surveillance information.

With input from the statewide Hepatitis C Advisory Committee—whose members include public health nurses, consumers, health care and social service providers, and MDPH staff — the HCV surveillance system has been revised. MDPH will be working directly with medical providers and institutions to obtain information on all cases of non-acute HCV infection. In most cases, the only data requested will be demographic and laboratory testing information. Only a small (randomly-selected) sample of cases will be assessed for risk history. All relevant information obtained with this system will be provided to the appropriate LHD in a line listing to be sent out weekly.

For acute cases of HCV infection, except in the case of LHDs with the capacity to lead investigations, MDPH epidemiologists will follow up most cases. In either situation, LHDs will be an educational resource for HCV patients choosing to contact them.

This system should allow HCV surveillance data to be collected more efficiently so that the data can be better used for program planning. It will also significantly reduce the reporting burden of LHDs. The implementation date is anticipated for late summer, 2003, (more information on details of the system's operation will be available). If you have questions about the proposed changes to Hepatitis C surveillance, please call the Division of Epidemiology and Immunization at 617-983-6800.

IMPORTANT NEWS

Please see page 8 for important information on future issues of Communicable Disease Update

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QuantiFERON Update

The tuberculin skin test (TST) has long been the standard method used to diagnose tuberculosis infection. In 2001, a new test, QuantiFERON®-TB (QFT) was approved by the Food and Drug Administration (FDA) as an "aid for detecting latent *Mycobacterium tuberculosis* infection (*1*)." However the TB Division has determined that the test needs further evaluation before it can be provided in our TB Clinics.

QuantiFERON®-TB utilizes whole blood and measures the release of interferon-gamma by blood leukocytes in response to stimulation by purified protein derivative. The QuantiFERON®-TB test does not measure the same components of the immunologic response as does the TST, but results are moderately concordant.

The test can be accomplished after a single patient visit. The test does not boost immune responses, although prior TST may affect the QFT response. Compared with TST, QFT results are less subject to reader bias and error, since the output is a numerical stimulation index. As with the TST, interpretation and indicated applications of QFT differ for persons according to their risk for tuberculosis infection and for developing TB.

CDC recently published Guidelines for the use of QFT. As with the TST, testing should be conducted among groups at risk for recent infection with *M. tuberculosis* and those who, regardless of duration of infection, are at increased risk for progression to active TB. Keeping this in mind, CDC recommends QFT can be considered for latent TB infection (LTBI) screening as follows:

- initial and serial testing of persons with an increased risk for LTBI
- initial and serial testing of persons who are, by history, at low risk for LTBI but whose future activity might place them at increased risk for exposure
- testing of persons for whom LTBI screening is performed but who are not considered to have an increased probability of infection (e.g., entrance requirements for certain schools and workplaces).

Confirmation of QFT results with TST is possible because performance of QFT does not affect subsequent QFT or TST results. The probability of LTBI is greatest when both the QFT and TST are positive. Considerations for confirmation are as follows:

- When the probability of LTBI is low, confirmation of a positive QFT result with TST is recommended before initiation of LTBI treatment.
- TST can also be used to confirm a positive QFT for persons at increased risk for LTBI. However, the need for LTBI treatment when QFT is positive and the subsequent TST is negative should be based on clinical judgment and perceived risk.
- Negative QFT results do not require confirmation, but results can be confirmed with either a repeat QFT or TST if the accuracy of the initial test is in question.

QFT is not recommended for:

- Evaluation of persons with suspected tuberculosis, since active TB can actually suppress the QFT, so the TST should be used if active TB is suspected.
- Assessment of contacts of persons with infectious tuberculosis, because rates of conversion of QFT and TST after a known exposure to *M. tuberculosis* have not been compared.
- Screening of children aged <17 years, pregnant women, or for persons with clinical conditions that increase the risk for progression of LTBI to active TB (*e.g.,* human immunodeficiency virus infection).
- Confirmation of TST results because injection of PPD for TST might affect subsequent QFT results.
- Diagnosis of *M. avium* complex disease.

PUBLIC HEALTH NURSE SPOTLIGHT

This issue of Communicable Disease Update highlights Public Health Nurse Linda Saravo, RN, of the Fall River Health Department. Now in her 17th year with the department, Linda is frequently referred to as "the contagious nurse" or "the communicable nurse" by her patients in the community. In addition to being responsible for disease investigation, she functions as the Fall River Chest Clinic nurse, performs DOT (directly observed therapy) and monitors TB patients in the community. Additionally she performs tuberculin skin testing, and assists with immunizations, both at City Hall and "on site".

Linda's favorite part of the job is the investigative process. As a child she remembers being fascinated by an old Ben Casey episode that investigated a hepatitis B outbreak in a college lab setting. It was to be the inspiration for her career in disease prevention and control. Linda leaves "no stone unturned" when conducting contact investigations. She credits her early job experience, working with physically and medically challenged individuals, in honing the nursing skills necessary to work with patients unwilling or unable to communicate their symptoms. In a culturally diverse setting, these skills are critical to her work.

The elderly and those who fall outside the mainstream of society find a special place in Linda's heart. Linda recounts a situation

where she befriended an older patient who was hospitalized and who asked Linda if he could use her name as "next of kin". She was the only person at his burial, but felt honored that she was able to be the family he did not have.

In response to the question, what is the best way someone could compliment her on her work Linda replies: "Dr. Sheehan, the Fall River TB Physician, in speaking with a colleague, stated that Linda is the best nurse advocate, she stands up for the patients' rights and cares about the patients she sees".

continued on page four

Pneumoccoal Conjugate Vaccine Shortage Over!

Pneumococcal conjugate vaccine (PCV7) production and supply are now sufficient to permit a return to the routine 4-dose schedule for all infants and young children. The Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) are recommending that all health-care providers identify those children for whom doses have been deferred and recall them to complete the series.

Background

On December 28, 2001, the Massachusetts Department of Public Health (MDPH) issued an advisory alerting providers that a "moderate" shortage of PCV7 existed in Massachusetts. Providers were asked to defer the 4th dose in healthy children < 24 months of age and any doses in healthy children between 24-59 months of age, but to continue immunization of all children with medical conditions placing them at high risk for invasive pneumococcal disease. They were also requested to maintain recall lists of children whose doses were deferred. The shortage never became severe enough to affect the infant schedule.

Prioritization of Groups for Catch-Up

Since providers may not be able to recall all children simultaneously due to logistical or vaccine supply issues, groups to be recalled should be prioritized in this order:

1. **Any infants < 12 months of age with < 3 doses or high-risk* children of any age with < 4 doses.** In Massachusetts, there should not be any under-immunized children in these categories due to the vaccine shortage. However, if they are identified in your practice, they should be prioritized first for recall.

   * High risk groups include: children with sickle cell disease, asplenia, human immunodeficiency virus infection, chronic illness (including cardiac disease, pulmonary disease, diabetes), CSF fluid leak, cochlear implant, or other immunocompromising conditions and treatments.

2. **Children < 24 months of age with < 4 doses.** Children < 24 months of age whose 4th dose was deferred should be recalled second.

3. **Children 24 – 59 months of age with < 4 doses.** Older children whose 4th dose was deferred should be recalled third. Prioritization within this older age group, if needed, would be given to children who are 24-35 months, American Indian/Alaska Native and black children, and those who attend group child care centers.

Vaccine Ordering

MDPH now advises providers to return to their normal vaccine ordering patterns for PCV7 by increasing their next monthly vaccine order by 30 % plus additional doses to catch-up under-immunized children. Vaccine orders will need to be increased by 30 to 50 % over the next few months until catch-up is complete. Providers are encouraged to order vaccine on a monthly basis and maintain no more than a 1-2 month inventory at any given time. If you have questions, contact the Vaccine Management Unit at 617-983-6828

Please report cases of invasive pneumococcal disease to both your local board of health and the MDPH Division of Epidemiology and Immunization at 617-983-6800 or 888-658-2850. If you have any questions, please call the MDPH Immunization Program at 617-983-6800 or 888-658-2850.

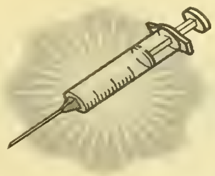
Important Information About Availability of Flu Vaccine

Due to funding reductions, the amount of influenza vaccine available through the Massachusetts Department of Public Health (MDPH) for this coming influenza season has been reduced. State-supplied influenza vaccine is being prioritized to high-risk children, long-term care facilities and public provider sites (i.e. local boards of health, visiting nurse associations and community health centers).

Unfortunately, MDPH will not be able to supply influenza vaccine for adults seen at private provider offices. However, flu vaccine is available for purchase from the following manufacturers.

Aventis	800-822-2463
General Injectable and Vaccine (Medeva)	800-521-7468

If you have questions, please contact the MDPH Vaccine Management Unit at 617-983-6828.



Protect Your Patients,
your famiily
and yourself!

All health care workers
should get a flu vaccine
every year!

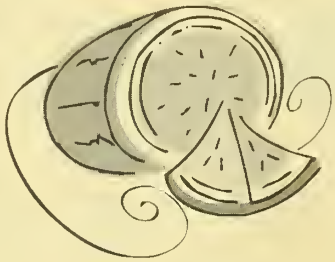
Congratulations to Dr. Susan Lett, Medical Director of the Massachusetts Department of Public Health, Immunization Program, who was recently elected an Honorary Fellow of The American Academy of Pediatrics.

Welcome Thomas Bertrand, new Director of the Division of STD Prevention

The Bureau of Communicable Disease Control and the staff of the Division of Sexually Transmitted Disease Prevention welcome Tom Bertrand as the new Division Director. Many at MDPH know Tom from his years of service with the health department in the neighboring state of Rhode Island. He comes to the Massachusetts Department of Public Health from the Rhode Island Department of Health, where he served for 10 years, most recently as Assistant Division Director for the Division of Disease Control and Prevention. Prior to holding that position, he served in several positions at the RIDOH, including Chief Administrator of the Office of Communicable Diseases, and manager of the Immunization Program and the Environmental Lead Program. Prior to working in Rhode Island, Tom was with the New York Department of Health.

Tom has served as the Chair of the Ocean State Adult Immunization Coalition and has been active in the National Coalition of STD Directors, serving on the Board and as Treasurer. He received his Masters in Public Health in Epidemiology from the State University of New York at Albany and also has an M.A. degree in Psychology from Columbia University.

Tom Bertrand comes to Massachusetts with broad experience in public health practice, program management, epidemiology and STD prevention and control. He has been involved in STD prevention and control on a state and national level for the past five years. We look forward to his continued leadership in this area in his new role with MDPH. Tom joined our staff on June 23, 2003. His office is located at the State Laboratory Institute, 305 South Street, in Jamaica Plain.



TB Nurse Spotlight

continued from page two

The TB Division is pleased to recognize Linda Saravo for her dedication and commitment to TB Prevention and Control in the city of Fall River. The Fall River Health Department and the TB Clinic at St. Anne's Hospital are fortunate to have her as part of their team.

STDs and Adolescents

Continued from page one

years old (see Figure 1), but amounts to an overall 53% increase in chlamydia infection and 38% increase in gonorrhea. Some of this gradual increase in reported chlamydia infection, and to a lesser extent in gonorrhea, may be due to the adoption of new, easier and more sensitive diagnostic tests and increased screening of asymptomatic individuals. In individuals aged less than 15 years old, stable and even decreasing rates of infection through 2000 have been followed by dramatic increases in reported infections in 2001 and 2002 (between 2000 and 2002, 2.5-fold increase in chlamydia infection and 3.3-fold in gonorrhea, see Figure 2).

While numbers of cases in younger teens are small (<300 for chlamydia and <100 for gonorrhea), the numbers had been very stable over a number of years. This dramatic and worrisome increase in STDs among younger teens is consistent with other indications of increased sexual activity in this age group and the pattern of having older partners who may be more likely to have infection. Fortunately, preliminary data for the first half of 2003 suggest slowing of this trend, but we must await final results.

Recent reports and trends in reported STDs in Massachusetts point to the need for more sex and HIV/STD prevention education for teens, especially younger teens.

Figure 1: Rates of Reported Chlamydia Infection and Gonorrhea Among Persons 15 to 19 Years Old in Massachusetts, 1993-2002

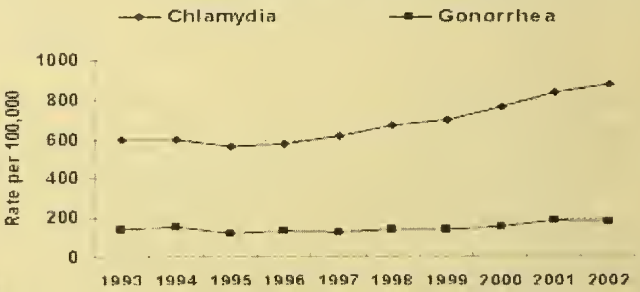
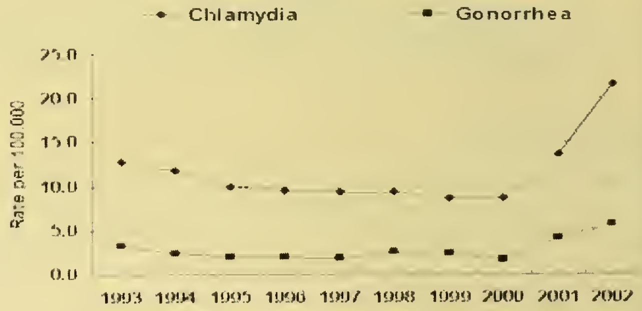


Figure 2: Rates of Reported Chlamydia Infection and Gonorrhea in Massachusetts Among Persons Under 15 Years of Age, 1993-2002



The Return of SARS

Although the identification of Severe Acute Respiratory Syndrome (SARS) cases has ended and travel advisories and alerts for affected areas have been removed, it is expected that SARS will re-emerge, most likely in areas already affected by the early 2003 outbreak.

You are the medical director at a college attended by students from all over the world. Many of your students come from mainland China (an area with high SARS activity during the 2003 outbreak). Because it appears that SARS has re-emerged in mainland China, you are concerned about a special program at your school which will be attended by students from around the world, including China. Should you refuse admission to the students from China, allow them to come but quarantine them, or do nothing?

SARS is a respiratory illness that was identified in countries throughout the world during early 2003. The incubation period for SARS is usually 2 to 7 days but may be as long as 10 days. Early symptoms include fever (>100.4°F [>38.0°C]), chills, headache, malaise, myalgia, and mild respiratory symptoms. After 3 to 7 days, a lower respiratory phase of illness begins with the onset of a dry, nonproductive cough. Ten to twenty percent of cases require intubation and mechanical ventilation.

It is thought that SARS is caused by a novel coronavirus (SARS Co-V) that is spread person-to-person through respiratory droplets and that a person is infectious when he/she is symptomatic (e.g., fever and respiratory symptoms). Close contact with a SARS case is necessary for transmission of the virus. Close contact includes living with a person, direct physical contact with a person, kissing, embracing, and sharing food or beverages. Areas affected by the 2003 outbreak include mainland China, Hong Kong, Taiwan, Vietnam, Singapore and Toronto, Canada. Persons coming to the US from areas with active SARS cases were instructed to monitor their health for 10 days after their departure from the high-risk area.

Students from China should not be refused admission to your school; however, you should set up a system for monitoring the high-risk student's health for the 10-day monitoring period and develop a plan of action should a student become symptomatic. The 10-day monitoring period should include the following:

1. Monitor high-risk students for fever and perform a daily assessment of respiratory symptoms.

2. In the absence of both fever and respiratory symptoms, students do not need to limit their activities during the 10-day monitoring period. However, the student's activities should be tracked so contact tracing may be implemented should the student become symptomatic.

3. If a high-risk student develops a fever OR respiratory symptoms during the 10-day monitoring period, she/he should be evaluated by a healthcare provider immediately. The healthcare provider should be notified that the patient may have been exposed to SARS so the necessary infection control precautions are implemented.

4. A high-risk symptomatic student should follow the infection control precautions listed below:

- If fever OR respiratory symptoms occur, the student should not participate in activities but should be isolated in a private room while awaiting a health-care evaluation.

- If symptoms improve or resolve within 72 hours after first symptom onset, the student may resume activities after consultation with local public health authorities.

- If the student meets or progresses to the SARS case definition (e.g., develops fever AND respiratory symptoms) she/he should be re-evaluated by a healthcare provider immediately. Infection control precautions should be continued until 10 days after the resolution of fever, provided respiratory symptoms are absent or improving.

- If the illness does not progress to meet the case definition, but the student has a persistent fever or unresolving respiratory symptoms, infection control precautions should be continued for an additional 72 hours, at the end of which time a clinical evaluation should be performed. If the illness progresses to meet the case definition, infection control precautions should be continued as described above. If case definition criteria are not met, infection control precautions can be discontinued after consultation with local public health authorities and the evaluating clinician.

If you have questions about a specific situation, an epidemiologist with the Division of Epidemiology and Immunization, Epidemiology Program is available 24 hours per day, 7 days per week to assist you (617) 983-6800.

You may also use this situation to reinforce basic hygiene and infection control with all students and staff. The most effective means of SARS prevention, and prevention of many other infectious diseases, is good hand hygiene. Frequent handwashing with soap and water or an alcohol-based hand gel or rub is imperative. Also, one should always cover his/her nose and mouth with a tissue when coughing or sneezing. Make sure students and staff have adequate access to handwashing facilities. Remind students not to share food or beverages.

Because SARS is a newly identified syndrome, information is rapidly changing. For the most up-to-date information regarding SARS, including the SARS case definition, high-risk areas for SARS and infection control precautions, see the Centers for Disease Control and Prevention SARS web site: http://www.cdc.gov/ncidod/sars/index.htm.

Refugee and Immigrant Health

Roundtables on Refugee and Asylee Health

During January and February 2003, the Refugee and Immigrant Health Program (RIHP) hosted a series of five roundtable discussions across the state to explore issues related to refugee and asylee health. The roundtables, organized to provide information, feedback and guidance to RIHP, as a forum for discussion among refugees, asylees, and persons from public health, community health, refugee resettlement, mutual assistance associations, and community based organizations. Approximately 110 people actively participated in the roundtables, representing a wide variety of backgrounds and roles.

While much of the discussion focused on refugees and asylees, many of the points made were relevant to newcomers, generally. Among the issues identified were:

♦ Language access for health services continues to be of concern, particularly for newer communities and in settings other than major hospitals.

♦ Gaps between health services providers and newcomer communities exist and result in poor utilization of available health services and low levels of awareness about newcomers among providers.

♦ A broad range of public health services – including communicable disease control, substance abuse services, oral health, school health, domestic violence, health promotion, and HIV prevention, clinical and case management services – are important for newcomers. Cultural and linguistic accessibility is crucial.

♦ Paying for health care is problematic, as refugee/asylee medical benefits are time-limited and many entry level positions do not have health benefits. Providers, as well, cited the complexity of eligibility requirements for public insurance programs and changing benefits.

♦ Addressing mental health needs remains a challenge. Refugees and asylees are at risk for adjustment disorders and anxiety as well as the physical consequences of torture and trauma. There is a need for quality mental health services that are culturally and linguistically accessible.

♦ Asylees are not recognized within communities nor by health care providers for a number of reasons. There is a need for outreach and information related to asylees in order to increase linkage with available services and improve the quality of services.

♦ Refugee children and elders have unique needs that are often unrecognized or unmet. Children may have been witness to violence, had interrupted schooling, and arrive with limited English skills. Elders are often isolated both within their ethnic communities and from the larger community, and face many challenges in accessing services.

Participants discussed strategies to address identified needs. Most focused on increased partnerships, information sharing, bilingual/bicultural outreach, and education and training. The rich discussions that were part of each roundtable were invaluable.

Somali Bantu

During May 2003 the first group of Somali Bantu refugees to be resettled in the U.S. departed from Kenya. In 2000, the U.S. pledged to consider for resettlement 10-12,000 Somali Bantu, most of whom have been in refugee camps for years and cannot return to Somalia. While processing was delayed post-9/11, it now appears that this particular group of at-risk refugees will begin to move to the U.S.

The Somali Bantu were originally brought to Somalia as slaves in the 18-19th centuries from east and southern Africa. Although freed during the colonial period, most Bantu continued to be in low status positions in society. In a society that revered nomadic culture and clan connections, Bantu were settled agricultural workers without the protection of a clan system. During the civil war that followed the overthrow of Siyaad Barre in 1991, Bantu were often the targets of violence and persecution. In 1992, many fled across the border to Kenya, where they remain.

In Massachusetts, Somali Bantu will be resettled with the support of the Greater Springfield Community Partnership for Refugee Resettlement, a collaborative that is led by Jewish Family Service. It is expected that approximately 200 new arrivals will be served by the partnership over a two to three year period. In addition, resettlement agencies in Boston and Worcester have been approved to resettle Somali Bantu, although arrivals in these areas are dependent on processing and movement from Kenya.

Somali Bantu have had little to no experience with Western health care prior to arriving in the U.S. Strategies to address health issues will need to take this into consideration, together with cultural beliefs and practices.

The Center for Applied Linguistics has completed a Somali Bantu Cultural Profile designed to be of use to a broad range of providers. The profile is available on the web at www.culturalorientation.net.

World Refugee Day 2003

June 20th was designated World Refugee Day by the United Nations High Commission for Refugees (UNHCR). This year the focus was on the 8 million refugee youth worldwide. According to UNHCR, refugee youth are routinely subjected to separation, exploitation, abuse, violence and having much greater responsibilities than they may be prepared to take on. They face exposure to HIV/AIDS, risk for military recruitment, and extremely limited access to education.

In the words of Ruud Lubbers, UN High Commissioner for Refugees, "A refugee's life is never an easy one, but it's especially tough on young people who are robbed of what should be the most formative, promising and exciting years of their lives. At a time when they should be full of hope and dreams for the future,

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New Reportable Diseases and Isolation and Quarantine Requirements

Culminating two and a half years of work by the Massachusetts Department of Public Health (MDPH), Bureau of Communicable Disease Control, and its public health partners, the revised 105 CMR 300.000: Reportable Diseases and Isolation and Quarantine Requirements were issued on February 14, 2003. These regulations have been comprehensively updated to incorporate new federal communicable disease surveillance recommendations and the latest recommendations for isolation and quarantine. The last time these regulations were comprehensively amended was in 1992, with a HIV/AIDS surveillance specific modification in 1998.

In preparing the revision of the regulations the Bureau of Communicable Disease Control convened an advisory committee comprised of representatives from local boards of health, other Bureaus of MDPH, professional organizations and other public health professionals and partners. The advisory committee met numerous times over two years and provided initial input and comment.

The revisions include the addition of 17 reportable diseases or conditions. Also clarifications and modifications include: by whom and to where should case reports be sent, what information is required in case reports, definitions of specific terms, issues of confidentiality and access to medical records, temporary reporting requirements on an emergency basis, and laboratory reporting.

The new information, including a summary of the changes, is available on line at www.state.ma.us/dph/cdc/epii/epi.htm#reporting. Also posted are three different lists of the new reportable diseases: Diseases Reportable by Healthcare Providers; Diseases Reportable by Laboratories; and Diseases Reportable by Local Boards of Health.

World Refugee Day

continued from page six

they are instead faced with the harsh reality of displacement and deprivation."

Staff with the Refugee and Immigrant Health Program acknowledged World Refugee Day reflected on their own experiences and that of their sixteen refugee communities that have resettled in the U.S. over the last 28 years. This diverse staff exemplifies the vibrancy and strength found within refugee communities.

Human Monkeypox Infection Identified for the First Time in the United States

Over 80 cases of suspect human monkeypox infection have been reported in the United States. These cases represent the first evidence of community-acquired monkeypox infection in the U.S. Cases had onset of illness beginning in early May 2003 and all cases had direct or close contact with recently purchased, ill prairie dogs.

Human monkeypox is a rare febrile rash illness caused by an orthopoxvirus and is seen primarily in the rainforest of Central and West Africa. African rodents act as the major reservoir for the virus, sporadically spreading the virus to other rodents, lagomorphs (hares and rabbits), and primates, including humans. Human symptoms begin with fever and muscle aches progressing to include a pustular, smallpox-like rash, and prominent lymphadenopathy. The rash can involve the palms of the hands and the soles of the feet, but fewer lesions appear on the body than with smallpox and patients are much less sick. Unlike smallpox, the lesions can occur in crops and therefore may be at various stages of development. The average incubation period is 12 days (range 7-21 days). Person-to-person transmission is rare but possible. The case fatality rate ranges from 1-10%.

The current outbreak of monkeypox in the U.S. has been linked to close contact with prairie dogs distributed to two pet stores as well as during two pet "swap meets" held in Wisconsin and Illinois. Prior to their sale, the prairie dogs were exposed to several rodent species from Africa, including a sick Gambian giant rat. Animal tracebacks are ongoing. No prairie dogs or African rodents were transferred to Massachusetts from the suspect facilities.

The Massachusetts Department of Public Health recommends that people avoid contact with prairie dogs, Gambian giant rats and other wild or exotic pets that appear ill (e.g., are missing patches of fur, have a visible skin rash, or have eye or nasal discharge). In addition, persons in contact with prairie dogs, Gambian giant rats, or other wild or exotic animals should thoroughly wash their hands with soap and water after touching the animals.

It is illegal to own wild animals in Massachusetts without obtaining a permit from the Division of Fisheries and Wildlife. As of June 11, 2003, the CDC and FDA have prohibited the importation of all rodents from Africa due to the potential that they can spread monkeypox. Also prohibited is the sale, distribution, transport, or release into the environment of prairie dogs, and specific rodents from Africa.

Additional monkeypox information may be accessed on the CDC web site: www.cdc.gov/ncidod/monkeypox/index.htm

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In order to save money and take advantage of advances in technology, Communicable Disease Update will no longer be available in hard copy. In order to keep you updated on the latest information from the Bureau of Communicable Disease control, we will become a web-based publication. CD Update can be found on the Massachusetts Department of Public Health website. You can access CD Update via the following link:

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Christine C. Ferguson, Commissioner of Public Health

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